Why is this programme distinct?	1. **Indigenous Development**: Trains biomedical professionals for native creation of devices, in line with Make in India. 2. **Interdisciplinary Curriculum**: Integrates inputs from Science, Engineering, Medicine, and Management. 3. **Industry Collaboration**: Works with industry and doctors for industry-ready graduates and partners with renowned R&D centers and hospitals. 4. **Hands-on Experience**: Includes on-campus hospital visits and mandates two major industry internships. 5. **Market-ready Prototypes**: Guides capstone projects for creating biomedical devices meeting market needs. 6. **Cutting-edge Exposure**: Exposes students to latest developments through conferences and exhibitions. 7. **Quality Assurance**: Ensures project evaluations via presentations to medical and industry committees. 8. **Entrepreneurial Support**: Backs start-ups via PSG STEP in PSG Institutions. 9. **Holistic Education**: Fills training gaps with courses in Personality Development, Character Development, Human Values, and Ethics.

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester I									
	Calculus and Its Applications	3	2	0	4	40	60	100	BS
	English For Professional Skills – Medical Terminology	3	0	0	3	40	60	100	HS
	Human Anatomy and Physiology	3	0	0	3	40	60	100	BS
	Problem Solving and C Programming	3	0	0	3	40	60	100	BS
	Medical Physics	3	0	0	3	40	60	100	BS
	Problem Solving and C Programming Lab	0	0	4	2	60	40	100	BS
	Mathematical Foundations Lab	0	0	4	2	60	40	100	BS
	Professional Skills and Practices	0	0	2	0	0	0	0	EEC
Total		**15**	**2**	**10**	**20**	**320**	**380**	**700**	
Semester II									
	Transforms and Partial Differential Equations	3	2	0	4	40	60	100	BS
	Data Structures and Algorithms	3	0	0	3	40	60	100	PC
	Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
	Mechanical Design and Drawing	3	2	0	4	40	60	100	ES
	Basics of Computational Biology	3	0	0	3	40	60	100	BS
	Data Structures Lab	0	0	4	2	60	40	100	PC
	Electrical and Electronics Engineering Lab	0	0	4	2	60	40	100	BS
	NSS/ NCC/ NSO/ Community Connect	0	0	2	0	0	0	0	EEC
Total		**15**	**4**	**10**	**21**	**320**	**380**	**700**	

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester III									
	Database Management system	3	0	0	3	40	60	100	PC
	Electronics and Linear Integrated Circuits	3	2	0	4	40	60	100	PC
	Biocompatible Materials and Flexible Stretchable Electronics	3	0	0	3	40	60	100	PC
	Biomedical Equipment & Instrumentation	3	0	0	3	40	60	100	PC
	Biosignal Processing	3	0	0	3	40	60	100	PC
	Electronic Devices and Circuits Lab	0	0	4	2	60	40	100	PC
	Biomedical Instrumentation & BIOPAC Data Acquisition System Lab	0	0	4	2	60	40	100	PC
	Competencies in Social Skills and Environment Science	0	0	2	0	0	0	0	EEC
Total		**15**	**2**	**10**	**20**	**320**	**380**	**700**	
Semester IV									
	Finance and Project Management	3	0	0	3	40	60	100	HS
	Biomedical Product Development Cycle – Case Studies	3	0	0	3	40	60	100	PC
	Embedded Systems and IoT	3	2	0	4	40	60	100	PC
	Wearable Devices and Remote Sensing	3	0	0	3	40	60	100	PC
	Medical Imaging and Radio Therapy	3	0	0	3	40	60	100	PC
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Embedded Systems and IoT Lab	0	0	4	2	60	40	100	PC
	Medical Imaging and Radio Therapy Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Ventilators and Infant Care	0	0	4	2	60	40	100	EEC
Total		**18**	**2**	**12**	**25**	**440**	**460**	**900**	

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester III									
	Database Management system	3	0	0	3	40	60	100	PC
	Electronics and Linear Integrated Circuits	3	2	0	4	40	60	100	PC
	Biocompatible Materials and Flexible Stretchable Electronics	3	0	0	3	40	60	100	PC
	Biomedical Equipment & Instrumentation	3	0	0	3	40	60	100	PC
	Biosignal Processing	3	0	0	3	40	60	100	PC
	Electronic Devices and Circuits Lab	0	0	4	2	60	40	100	PC
	Biomedical Instrumentation & BIOPAC Data Acquisition System Lab	0	0	4	2	60	40	100	PC
	Competencies in Social Skills and Environment Science	0	0	2	0	0	0	0	EEC
Total		**15**	**2**	**10**	**20**	**320**	**380**	**700**	
Semester IV									
	Finance and Project Management	3	0	0	3	40	60	100	HS
	Biomedical Product Development Cycle – Case Studies	3	0	0	3	40	60	100	PC
	Embedded Systems and IoT	3	2	0	4	40	60	100	PC
	Wearable Devices and Remote Sensing	3	0	0	3	40	60	100	PC
	Medical Imaging and Radio Therapy	3	0	0	3	40	60	100	PC
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Embedded Systems and IoT Lab	0	0	4	2	60	40	100	PC
	Medical Imaging and Radio Therapy Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Ventilators and Infant Care	0	0	4	2	60	40	100	EEC
Total		**18**	**2**	**12**	**25**	**440**	**460**	**900**	

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester V									
	Patient Monitoring System Development	3	0	0	3	40	60	100	PC
	Biomechanics in Device Design	3	0	0	3	40	60	100	PC
	Basics of Clinical Trial	3	0	0	3	40	60	100	PC
	Biostatistics	3	0	0	3	40	60	100	PC
	Professional Elective I	3	2	0	4	40	60	100	PE
	Biomechanics Lab	0	0	4	2	60	40	100	PC
	Biosensor Interface Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Prosthetics and Orthotics Devices	0	0	4	2	60	40	100	EEC
Total		**15**	**2**	**12**	**22**	**380**	**420**	**800**	
Semester VI									
	AI & Medical Diagnostics	3	0	0	3	40	60	100	PC
	Cloud Computing	3	0	0	3	40	60	100	PC
	Entrepreneurship – Device Manufacturer / Hospital	3	0	0	3	40	60	100	PC
	Ergonomics and Aesthetic Design of Medical Devices	3	0	0	3	40	60	100	PC
	Professional Elective II	3	0	0	3	40	60	100	PE
	AI & Medical Diagnostics Lab	0	0	4	2	60	40	100	PC
	Ergonomics Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Surgery and Physiotherapy Equipment	0	0	4	2	60	40	100	EEC
Total		**15**	**0**	**12**	**21**	**380**	**420**	**800**	
Semester VII									
	Project Work/ Internship - I - Hospital/Biomedical Industry Project	**0**	**0**	**-**	**12**	**60**	**40**	**100**	**PW/ I**

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester VIII									
	Ethics and Regulatory Standards	4	0	0	4	40	60	100	PC
	Biomedical Entrepreneurship	3	0	0	3	40	60	100	PC
	Block Chain and Machine Learning	3	0	0	4	40	60	100	PC
	Professional Elective III	3	2	0	4	40	60	100	PE
	Open Elective I	3	2	0	4	40	60	100	OE
	Data Analytics & Visualization Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Vital Parameter Analyzer	0	0	4	2	60	40	100	EEC
	Patient Monitoring System Development - Capstone Project I	0	0	4	2	60	40	100	EEC
Total		**16**	**4**	**12**	**25**	**380**	**420**	**800**	
Semester IX									
	Software and Hardware Security	3	0	0	3	40	60	100	PC
	Digital Image Processing and Computer Vision	3	0	0	3	40	60	100	PC
	Medical Ventilator, CT scan Equipment & Dialysis Equipment Design	3	0	0	3	40	60	100	PC
	Medical Science Document Writing	3	0	0	3	40	60	100	HS
	Open Elective II	3	2	0	4	40	60	100	OE
	Design, Modeling and Digital Fabrication Lab	0	0	4	2	60	40	100	PC
	Hospital Visit - Therapeutic Equipment	0	0	4	2	60	40	100	EEC
	Development of Therapeutic Equipment - Capstone Project II	0	0	4	2	60	40	100	EEC
Total		**15**	**2**	**12**	**22**	**380**	**420**	**800**	
Semester X									
	Project Work/ Internship - II - Hospital/Biomedical Industry Project	**0**	**0**	**-**	**12**	**60**	**40**	**100**	**PW/ I**

Professional Electives (Any Three) (Each Elective - 45 hours, 3 Credits)	
1.	Essentials of Cyber-Physical System Security
2.	Design Thinking
3.	Environmental Science and Green Computing
4.	Ethical Hacking
5.	Electronic Medical Records
6.	Biomedical Asset Management and Standardization
7.	Virtual and Augmented Reality
8.	Principles of Management and Behavioral Sciences
9.	Regulatory Affairs in Biomedical Engineering
10.	Clinical Engineering
11.	Nuances of Nutrition
12.	Design and Innovation in Healthcare
13.	Cardiovascular Biomechanics
14.	Drug Delivery Systems
15.	Biomedical Data Analysis
16.	Biomedical Product Design
17.	VLSI Design and Fabrication
18.	Integrated Circuit Testing and Reliability
19.	Biomedical Device Prototyping and Testing
20.	Medical Device Manufacturing Processes
21.	Advanced Biomechanics
22.	Clinical Trials and Medical Device Evaluation
23.	Neural Interfaces and Brain-Computer Interfaces
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony`
Open Electives (Any One) (45 hours, 3 Credits)	
1.	Biomedical Microdevices
2.	Medical Robotics
3.	Biomedical Ethics
4.	Nanobiotechnology
5.	Entrepreneurship and Innovation
6.	Environmental Science and Sustainability
7.	Global Health and Development
8.	Artificial Intelligence and Machine Learning
9.	Digital Marketing
10.	Creative Writing
11.	Cyber Security and Privacy
12.	Financial Management and Investments
13.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Basic Science	BS	6
Engineering Science	ES	2
Humanities Science	HS	3
Professional Course	PC	24
Electives		
Professional Electives	PE	3
Open Electives	OE	1
Mandatory Electives	ME	2
Employability Enhancement Course	EEC	10
Project Work / Internship (PW/I)	PW/I	2
Lab		14
Total		**43 (T); 14 (L); 10 (EEC(P))**

Total Credits : 200

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; BS –**Basic Sciences**; HS-** Humanities & Social Sciences**; ES-** Engineering Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW/I -** Project Work/ Internship; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

2) MSc Hospital Management and Accreditation (Two-year programme)

Why is this programme distinct?	Many institutes offer hospital administration/management Programme. However, this Programme is unique because of the following features. 1. **Comprehensive**: The programme covers all aspects of hospital administration, including policies, structure, finance, human resources, and quality improvement. It uniquely includes accreditation standards from bodies like NABH, NABL, and JCI. 2. **Practical**: The programme trains students to conduct internal audits, assess compliance with standards, identify improvement areas, and implement corrective actions. 3. **Quality**: The programme focuses on quality assurance, teaching students to maintain and improve standards, enhancing patient care and safety. 4. **Risk**: The programme highlights risk management principles and practices. 5. **Application**: The programme emphasizes real-world application through an interdisciplinary approach. 6. **Improvement**: The programme promotes a culture of continuous improvement in hospital settings. 7. **Insight**: Guest speakers and industry experts provide valuable insights, sharing trends, challenges, and best practices in hospital management. 8. **Blend**: The course integrates theoretical knowledge, practical skills, and industry insights, preparing students to excel in hospital administration, adhere to standards, and drive continuous improvement.

Total Credits 80 Scheme

Semester I									
Course code	Course title	Hours/week			Credits	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Basic Health Sciences	3	0	0	3	40	60	100	BS
	Introduction to Hospital Management and Accreditation	3	0	0	3	40	60	100	PC
	Healthcare Delivery Systems and Models	3	0	0	3	40	60	100	PC
	Introduction to Healthcare Policy and Regulations	3	0	0	3	40	60	100	PC
	Healthcare Leadership and Management Principles	3	0	0	3	40	60	100	PC
	Survey of a teaching hospital	0	0	4	2	60	40	100	PC
	Survey of a corporate hospital	0	0	4	2	60	40	100	PC
	Survey of a primary care hospital	0	0	2	1	60	40	100	PC
Total		**15**	**0**	**10**	**20**	**380**	**420**	**800**	
Semester II									
Course code	Course title	Hours/week			Credits	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Healthcare Information Systems, Technology and Digital Health Standards for Hospitals	3	0	0	3	40	60	100	BS
	Clinical Governance and Risk Management	3	0	0	3	40	60	100	PC
	Healthcare Ethics and Legal Issues	3	0	0	3	40	60	100	PC
	General Epidemiology	3	0	0	3	40	60	100	PC
	Overview of Accreditation Standards and Processes	3	0	0	3	40	60	100	PC
	Open Elective I	3	0	0	3	40	60	100	OE
	Audit of Information Systems Management	0	0	4	2	60	40	100	PC
Total		**18**	**0**	**4**	**20**	**300**	**400**	**700**	

Semester III									
Course code	Course title	Hours/week			Credits	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Infection Control and Prevention	3	0	0	3	40	60	100	BS
	NABH - Entry Level Certification Programme	3	0	0	3	40	60	100	PC
	ISO 15189 "Medical laboratories - requirements for quality and competence"	3	0	0	3	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Performing an internal audit of a diagnostic laboratory	0	0	4	2	60	40	100	PC
	Performing an internal audit of a division in Radiology / Blood Bank	0	0	4	2	60	40	100	PC
	Performing an internal audit of the hospital as per entry level standards	0	0	4	2	60	40	100	EEC
Total		**15**	**0**	**12**	**21**	**380**	**420**	**800**	
Semester IV									
Course code	Course title	Hours/week			Credits	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	ISO 7101 – Management standard for quality in Healthcare organisations – an outline	3	0	0	3	40	60	100	PC
	Professional Elective II	3	0	0	3	40	60	100	PC
	Open Elective II	3	0	0	3	40	60	100	PC
	Performing an internal audit of any 5 departments of the hospital as per the 5th Edition of NABH Hospital Standards	0	0	20	10	60	40	200	EEC
Total		**15**	**0**	**20**	**19**	**180**	**220**	**400**	

Professional Electives - (Any one) (45 hours, 3 Credits)	
1.	NABH – Blood Centre Accreditation
2.	Organisational Structure of Hospitals
3.	NABH – Medical Imaging Services Accreditation
4.	Emerging trends & innovations in Hospital Management
5.	Teamwork
6.	Patient-centered care and patient experience
7.	Ayushman Bharat and other Healthcare Insurance
8.	Medical Tourism
9.	Telemedicine
10.	ISO 9000 family – Quality Management
11.	Planning and Management of Patient Care and support Services
12.	Equipment & Material Management
13.	5th Edition of NABH Hospital Standards
14.	Overview of safety and standards on X-ray equipment for radiography, radioscopy and CT, MRI
15.	Overview of safety and standards in Nuclear Medicine
16.	Continuous Quality Improvement (CQI) Methods and Tools
17.	Performance Measurement and Benchmarking
18.	Emergency Preparedness and Disaster Management in Hospitals
19.	Healthcare Marketing and Public Relations
20.	Environmental Sustainability in Healthcare Facilities
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives I - (Any one) (45 hours, 3 Credits)	
1.	Human Resource Management in Hospitals
2.	Supply Chain Management in Healthcare
3.	Cultural Competence and Diversity in Healthcare
4.	Basics of Accounting
5.	Lifestyle Modification and Health
6.	Basics of Yoga & Naturopathy
7.	Clinical Research
Open Electives II - (Any one) (45 hours, 3 Credits)	
1.	Bioethics
2.	Pharmacy for beginners
3.	Basics of Psychology
4.	Revenue cycle management
5.	Hindi/ German/ Japanese/ French Language
6.	Research Methodology
7.	Basics of Biostatistics, Quality tools and statistics software

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	14
Basic Science	BS	3
Electives		
Professional Electives	PE	2
Open Electives	OE	2
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	2
Lab		6
Total		**24 (T); 6 (L)**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; BS –**Basic Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

3) MSc/MS Industrial - Skills Training and Development (Two-year Programme)

Why is this programme distinct?	1. **Industry-Specific Focus**: Tailored for the industrial sector, addressing manufacturing, production, and engineering challenges. 2. **Hands-On Approach**: Includes practical components like case studies, simulations, and real-world projects. 3. **Integration of Skills**: Combines technical expertise with leadership capabilities. 4. **Modern Industrial Trends**: Keeps pace with automation, digital transformation, and sustainability practices. 5. **Customized Content**: Addresses operational, strategic, and HR challenges unique to industrial settings. 6. **Skill Development**: Emphasizes soft skills like communication, problem-solving, and decision-making. 7. **Ethics and Compliance**: Focuses on industrial safety, regulatory compliance, and ethical considerations. 8. **Networking Opportunities**: Offers connections with industry professionals, internships, and industry events. 9. **Interdisciplinary Approach**: Draws insights from engineering, business management, and HR. 10. **Preparation for Diverse Roles**: Prepares graduates for various leadership roles within the industrial sector.

Total Credits 80 Scheme

Course code	Course title	Hours/week			Credit	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
SEMESTER 1									
	Foundations of Learning and Development	3	0	0	3	40	60	100	PC
	Organizational Behavior and Development	3	0	0	3	40	60	100	PC
	Learning Technologies and Innovations	3	0	0	3	40	60	100	PC
	Instructional Design and Curriculum Development	3	0	0	3	40	60	100	PC
	Mandatory Elective	3	0	0	3	40	60	100	ME
	Professional Elective I	2	0	0	2	40	60	100	PE
	Professional Elective II	2	0	0	2	40	60	100	PE
	Experiential Learning Lab I	0	0	4	2	60	40	100	EEC
Total		**19**	**0**	**4**	**21**	**340**	**460**	**800**	
SEMESTER II									
Course code	**Course title**	**Hours/week**			**Credit**	**Maximum Marks**			**Category**
		L	**T**	**P/C**		**CA**	**FE**	**Total**	
	Strategic L&D Planning	3	0	0	3	60	40	100	PC
	Assessment and Evaluation in L&D	3	0	0	3	60	40	100	PC
	Leadership and Team Management	3	0	0	3	60	40	100	PC
	Facilitation and Coaching	3	0	0	3	60	40	100	PC
	Professional Elective III	3	0	0	2	60	40	100	PE
	Professional Elective IV	3	0	0	2	60	40	100	PE
	Experiential Learning Lab II	0	0	4	2	40	60	100	EEC
Total		**21**	**0**	**4**	**18**	**400**	**300**	**700**	
SEMESTER III									
Course code	**Course title**	**Hours/week**			**Credit**	**Maximum Marks**			**Category**
		L	**T**	**P/C**		**CA**	**FE**	**Total**	
	Advanced Learning Theories	3	0	0	3	60	40	100	PC
	Global Trends in Learning and Development	3	0	0	3	60	40	100	PC
	Ethical and Inclusive L&D Practices	3	0	0	3	60	40	100	OE
	Project Management for L&D	3	0	0	3	60	40	100	PC
	Problem-Solving Methods	3	0	0	3	60	40	100	ME
	Professional Elective V	3	0	0	2	60	40	100	PE
	Professional Elective VI	3	0	0	2	60	40	100	PE
	Experiential Learning Lab III	0	0	4	2	40	60	100	EEC
Total		**21**	**0**	**4**	**21**	**340**	**460**	**800**	

SEMESTER IV									
Course code	Course title	Hours/week			Credit	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Open Elective I	3	0	0	3	60	40	100	OE
	Professional Elective VII	3	0	0	2	60	40	100	PE
	Professional Elective VIII	3	0	0	2	60	40	100	PE
	Experiential Learning Lab IV	0	0	6	3	40	60	100	EEC
	Capstone Project Work	0	0	20	10	40	60	100	PW
Total		**9**	**0**	**20**	**19**	**220**	**180**	**400**	

Professional Electives (Any Eight) (30 hours, 2 Credits – Each Subject)	
Motor and Pump Industry	
1.	Motor Industry Dynamics and Trends
2.	Skill Development in Motor Manufacturing
3.	Safety and Compliance in Motor Industry Training
4.	Technology Integration in Motor Industry Training
5.	Customer Service Training for Motor Industry
6.	Maintenance and Repair Techniques for Motors
7.	Energy Efficiency in Motor and Pump Systems
8.	Innovations in Motor and Pump Design
Garments Industry	
1.	Garment Industry Fundamentals and Trends
2.	Apparel Production Techniques and Technology
3.	Quality Control in Garment Manufacturing
4.	Sustainable Practices in Garment Industry
5.	Fashion and Textile Design Training
6.	Supply Chain Management in Garment Industry
7.	Digitalization in Garment Manufacturing
8.	Consumer Behavior in Fashion
Auto Industry	
1.	Auto Industry Overview and Skill Requirements
2.	Advanced Manufacturing Techniques in Auto Industry
3.	Sustainability Practices in Auto Industry
4.	Quality Management Systems in Auto Manufacturing
5.	Supply Chain Management in Auto Industry
6.	Innovations in Auto Manufacturing
7.	Electric Vehicles and Hybrid Technologies
8.	Customer Service and Support in Auto Industry
Auto Component Industry	
1.	Introduction to Auto Components and Systems
2.	Precision Manufacturing for Auto Components
3.	Lean Manufacturing in Auto Component Industry
4.	Product Lifecycle Management for Auto Components
5.	Regulatory Standards and Compliance in Auto Components
6.	Advanced Materials in Auto Component Manufacturing
7.	Automation in Auto Component Production
8.	Market Dynamics in Auto Components

Plastic Injection Moulding Industry	
1.	Fundamentals of Plastic Injection Moulding
2.	Mold Design and Manufacturing
3.	Quality Control in Plastic Injection Moulding
4.	Advanced Materials in Plastic Injection Moulding
5.	Automation in Plastic Injection Moulding
6.	Environmental Considerations in Plastic Injection Moulding
7.	Innovations in Injection Moulding Technologies
8.	Market Trends in Plastic Injection Moulding

Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives - (Any Two) (30 hours, 2 Credits - Each Subject)	
1.	Leadership Theories and Practices
2.	Team Building and Management
3.	Communication Skills
4.	Project Management
5.	Strategic Planning
6.	Innovation and Change Management
7.	Financial Human Resource Management
8.	Industrial Safety and Compliance
9.	Quality Management
10.	Ethics and Corporate Social Responsibility
11.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	11
Electives		
Professional Electives	PE	8
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	4
Project Work	PW	1
Total		**22 (T); 4 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW -** Project Work; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

4) MSc/MS Microelectronics and Semiconductor Technology (Two-year Programme)

Why is this programme distinct?	1. **Visionary**: Designed with a visionary perspective, recognizing India's potential to become a global hub for semiconductor and chip-making industries (AtmaNirbhar). 2. **Demand-Driven**: Addresses the need for skilled professionals due to India's booming electronics and semiconductor manufacturing sector, equipping students with industry-relevant knowledge and practical skills. 3. **Cutting Edge**: Encompasses cutting-edge semiconductor technologies, including microelectronics design, fabrication, and integration. 4. **Specialized Knowledge**: Cultivates professionals with expertise in the design, development, and integration of micro and nanoelectronics devices, and semiconductor technologies to meet modern industry demands. 5. **Empowerment**: Empower students to excel in the dynamic semiconductor and VLSI industry, positioning them as qualified professionals ready for challenging global roles. 6. **Industry Integration**: Integrates industry insights into the curriculum through MoUs with renowned semiconductor industries in India, offering valuable interdisciplinary exposure and training. 7. **Internships**: Provides internship opportunities that serve as pathways to secure placements in reputed semiconductor companies, giving students practical experience and potential career opportunities. 8. **Advanced Studies**: Prepares students to pursue advanced studies in Microelectronics and Semiconductor technologies, fostering contributions to technological innovation and advancement. 9. **Excellence**: Promotes a culture of excellence and innovation by having student projects evaluated by a committee of industry and academic experts, ensuring quality and relevance. 10. **Leadership**: Molds students to lead diverse teams with integrity and effective communication, promoting lifelong learning and social responsibility.

Total Credits 80 Scheme

Semester I									
Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Micro and Nano Fabrication Technology	3	0	0	3	40	60	100	PC
	Transistor Technology and Circuit Design	3	0	0	3	40	60	100	PC
	Magnetic Materials Technology	3	0	0	3	40	60	100	PC
	Semiconductor Device Physics: Basic Devices	3	0	0	3	40	60	100	PC
	Material Design Principles for Electronic, Electromechanical and Optical Functions	3	1	0	4	40	60	100	PC
	Semiconductor Materials, Synthesis and Characterization	3	0	0	3	40	60	100	PC
	Modeling, Design and Simulation for Materials Lab	0	0	4	2	60	40	100	PC
	Semiconductor Materials, Synthesis and Characterization Lab	0	0	4	2	60	40	100	PC
Total		**18**	**1**	**8**	**23**	**360**	**440**	**800**	
Semester II									
Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Applied Quantum Computing Devices	3	0	0	3	40	60	100	PC
	High-Speed Semiconductor Devices	3	0	0	3	40	60	100	PC
	Semiconductor Optoelectronics and Photovoltaics	3	0	0	3	40	60	100	PC
	Sustainable Semiconductor Manufacturing Processes	3	0	0	3	40	60	100	PC
	Mandatory Elective	3	0	0	3	40	60	100	ME
	Professional Elective I	3	0	0	3	40	60	100	PE
	Digital Fabrication Lab	0	0	4	2	60	40	100	PC
	Semiconductor Manufacturing Techniques and Process Optimization Lab	0	0	4	2	60	40	100	PC
Total		**18**	**0**	**8**	**22**	**360**	**440**	**800**	

Course Code	Course Title	Hours/Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester III									
	Photonics Technology: Materials & Devices	3	0	0	3	40	60	100	PC
	Semiconductor Devices for RF and Microwave Electronics	3	1	0	4	40	60	100	PC
	Professional Elective II	3	0	0	3	40	60	100	PE
	Professional Elective III	3	0	0	3	40	60	100	PE
	Open Elective	3	0	0	3	40	60	100	OE
	Project work I	0	0	6	3	60	40	100	PW
	Technical Writing and Presentation	0	0	2	1	60	40	100	EEC
Total		**15**	**1**	**8**	**20**	**320**	**380**	**700**	
Semester IV									
	Project Work II	0	0	30	15	60	40	100	PW

Professional Electives (Any Three) (45 hours, 3 Credits – Each Subject)	
1.	Advanced Lithography
2.	Semiconductor Applications in Solar
3.	MEMS and Lab on a Chip
4.	Wearable and Implantable Sensors
5.	Physics and Manufacturing of Solar Cells
6.	Flexible and Stretchable Electronics
7.	Nanotechnology in Biology and Medicine
8.	Solid State Devices
9.	Analog Circuits and Embedded Systems for Sensors
10.	Electronics Packaging and Photonic Devices
11.	Radiation Effects and Reactor Materials
12.	Statistical and Probabilistic Data analysis Techniques
13.	Lasers: Principles and Systems
14.	Advanced MEMS Packaging
15.	Cybersecurity Fundamentals
16.	Ethics in Science and Technology
17.	Global Perspectives in Technology and Society
18.	Entrepreneurship and Innovation in Technology
19.	Nanoelectronics
20.	VLSI Signal Processing
Mandatory Electives (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony

Open Electives (Any One) (45 hours, 3 Credits)	
1.	Thermodynamics and Kinetics
2.	Organic Electronics
3.	Materials of Quantum Technologies
4.	Microfluidics
5.	Applied Solid State Physics
6.	Structure and Characterization of Semiconductor Materials
7.	Micro and Nano Fabrication
8.	Semiconductor Device Physics: Basic Devices
9.	Materials for Renewable Energy Technologies
10.	Cleanroom Technology and Semiconductor Manufacturing Practices
11.	Surface Science and Thin Film Technology
12.	Analog and Digital Integrated Circuits

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	12
Electives		
Professional Electives	PE	3
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	1
Project Work	PW	2
Lab		4
Total		**19 (T); 4 (L); 1 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW -** Project Work; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

5) MSc Sports Biomechanics and Kinesiology (Two-year Programme)

Why is this programme distinct?	1. Need to Develop Knowledge of the **theoretical basis** of Sports Biomechanics 2. Impart processing and Analysis Skills required to **analyse and understand human Motion using Laboratories, Computer Code and Simulation** 3. Facilitate practical experience with **applied biomechanics equipment – 3D Motion Analysis, Force Plates, Wearable Sensors Dynamometer** etc 4. Need to impart models **Motor Control Research Skills**, **Computer Coding Skills** to Solve **Complex Biomechanical** Problems to the students their Writing Skills 5. Enable teams and individuals to push the limits of **athletic performance Physiology, Biochemistry, Molecular**

Total Credits 80 Scheme

Semester I									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Biomolecules and Metabolism	3	0	0	3	40	60	100	PC
	Nutrition for Sports Exercise and Health	3	0	0	3	40	60	100	PC
	Introduction to Sports Biomechanics	3	0	0	3	40	60	100	PC
	Health Fitness and Wellness	3	0	0	3	40	60	100	PC
	Mandatory Elective	3	0	0	3	40	60	100	ME
	Practicum I	0	0	4	2	60	40	100	PC
	Practicum II	0	0	4	2	60	40	100	EEC
Total		**15**	**0**	**8**	**19**	**320**	**380**	**700**	

Semester II									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Sports Biomechanics Kinesiology	3	0	0	3	40	60	100	PC
	Principles and Methods of Sports Training	3	0	0	3	40	60	100	PC
	Developing Computer Models for Sports	3	0	0	3	40	60	100	PC
	Sports Performance and Health	3	0	0	3	40	60	100	PC
	Applied Biomechanics	3	0	0	3	40	60	100	PC
	Practicum III	0	0	4	2	60	40	100	PC
	Practicum IV	0	0	4	2	60	40	100	EEC
Total		15	0	8	19	320	380	700	

Semester III									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Dynamics of Gait	3	0	0	3	40	60	100	PC
	Mechanobiology	3	0	0	3	40	60	100	PC
	Motor Control and Motor Learning	3	0	0	3	40	60	100	PC
	Theories and Methods of Analysis in Competitive Sports	3	0	0	3	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Practicum V	--	--	4	2	60	40	100	PC
	Practicum VI	--	--	4	2	60	40	100	EEC
	Internship	--	--	4	2	60	40	100	EEC
	Total	**15**	**0**	**12**	**21**	**380**	**420**	**800**	

Semester IV									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Biomechanical Analysis of Athletic and Team Games	3	0	0	3	40	60	100	PC
	Open Elective	3	0	0	3	60	40	100	EEC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Project work/ Dissertation (including Research Work Done in Previous Semesters)	--	--	18	10	60	40	100	PW/D
Total		15	0	12	21	200	500	700	

Professional Electives - (Any Two) (45 hours, 3 Credits – Each Subject)	
1.	Fatigue, Injuries and Rehabilitation
2.	Human Anatomy and Physiology
3.	Natural Sciences in Sports and Exercise
4.	Psychological and Social Aspects of Sports
5.	Essentials of Sports
6.	Kinanthropometry
7.	MATLAB
8.	Biomechanics of Yoga Asanas
9.	Biomechanical Applications in Sports Training
10.	Application of Gross Anatomy in Sports
11.	Instrumentation and Techniques in Biomechanics
12.	Biomechanical Analysis of Human Movements.
13.	Statistics for Sports Science
14.	Mechanical Aspects of Biomechanics
15.	Advanced Motor Control and Learning
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives - (Any one) (45 hours, 3 Credits)	
1.	Exercise Physiology
2.	Sports Nutrition:
3.	Injury Prevention and Rehabilitation
4.	Psychology of Sport and Exercise
5.	Strength and Conditioning
6.	Biomechanical Analysis of Human Movement
7.	Applied Sports Technology
8.	Health and Fitness Assessment
9.	Ergonomics and Human Factors
10.	Research Methodology
11.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	15
Electives		
Professional Electives	PE	2
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	4
Project Work	PW	1
Lab		3
Total		**20 (T); 3 (L);4 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW -** Project Work; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

6) MSc/MS Innovative Textiles (PG - 2 years Programme)

Why is this programme distinct?	1. Focuses on **specialized knowledge and skills related to industrial textiles,** covering various aspects such as manufacturing processes, materials and applications. 2. Adopts an **interdisciplinary approach, integrating principles from textile engineering, material science, mechanical engineering, and industrial engineering** to provide a comprehensive understanding of industrial textiles. 3. Prepares students for hands-on training in industrial textile production processes, machinery operation, quality control, **and testing methods,** preparing them for practical challenges in the industry. **4.** Includes advanced courses in areas such as **textile chemistry, textile processing, composite materials, technical textiles and smart textiles, staying abreast of industry trends and innovations.** 5. Emphasizes **research and development** in industrial textiles, encouraging students to explore **new materials, technologies and applications to enhance industrial processes and product performance.** 6. **Collaborations with industry partners to facilitate guest lectures, industrial visits, internships and live projects,** providing students with real-world exposure and networking opportunities. 7. **Integrates concepts of sustainability, eco-friendly materials** and green manufacturing processes into the curriculum. 8. Develops **students' careers in various sectors such as textile manufacturing, automotive industry, aerospace industry, medical textiles, protective clothing and sports equipment manufacturing.**

Total Credits 80 Scheme

Semester I									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Statistical Analysis and Design of Experiments in Textile Engineering	3	2	0	4	40	60	100	BS
	Structure and Properties of Fibres	3	0	0	3	40	60	100	PC
	Characterization of Textile Polymers	3	0	0	3	40	60	100	PC
	Textile Reinforced Composites	3	0	0	3	40	60	100	PC
	Research Methodology and IPR	3	0	0	3	40	60	100	HS
	Statistical Analysis and Optimization Laboratory	0	0	2	2	60	40	100	PC
	Characterisation of Fibres and Composites Laboratory	0	0	2	2	60	40	100	EEC
Total		**15**	**2**	**4**	**20**	**320**	**380**	**700**	

Semester II									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	High-Performance Textiles	3	2	0	4	40	60	100	PC
	Processes and Machines of Textile Technology	3	0	0	3	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Professional Elective II	3	0	0	3	40	60	100	PE
	Professional Elective III	3	0	0	3	40	60	100	PE
	Textile Quality Evaluation Laboratory	0	0	2	2	60	40	100	PC
	Product Development Laboratory	0	0	2	2	60	40	100	EEC
Total		**15**	**02**	**04**	**20**	**320**	**380**	**700**	

Semester III									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Professional Elective IV	3	0	0	3	40	60	100	PE
	Professional Elective V	3	0	0	3	40	60	100	PE
	Mandatory Elective	3	0	0	3	40	60	100	ME
	Open Elective	3	0	0	3	40	60	100	OE
	Industrial Project Work/ Dissertation – Phase I	0	0	18	9	60	40	100	PW/D
Total		**9**	**00**	**20**	**21**	**140**	**160**	**300**	

Semester IV									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Industrial Project Work/ Dissertation – Phase II	0	0	40	20	60	40	100	PW/D
Total		**00**	**00**	**40**	**20**	**60**	**40**	**100**	

Professional Electives I- (Any one) (45 hours, 3 Credits)	
1.	Structure and Properties of Nonwovens
2.	Coated and Laminated Textiles
3.	Ballistic Protective Textiles
4.	Extreme cold and heat protective clothing
5.	Medical Textiles
Professional Electives II- (Any one) (45 hours, 3 Credits)	
1.	Sustainability in Textile Industry
2.	Textiles in Civil Construction and Transportation
3.	Textile Physics and Chemistry
4.	Product Development
5.	Advanced Textile Structures
Professional Electives III- (Any one) (45 hours, 3 Credits)	
1.	Textile and Wearable Electronics
2.	Textile-based Composite Technology and Additive Manufacturing
3.	Processes and Machines of Textile Technology
4.	Renewable Products for the Textile Industry
5.	Filtration Textiles
Professional Electives IV- (Any one) (45 hours, 3 Credits)	
1.	Enzyme Technology for Textile Processing
2.	Structural Mechanics of Fabrics
3.	Theory of Twisting
4.	Pollution Abatement in Textile Industry
5.	Design and Analysis of Textile Experiments
6.	Surface Modification of Textiles
Professional Electives V- (Any one) (45 hours, 3 Credits)	
1.	Advanced Textile Structures
2.	Smart Textiles
3.	Nanotechnology in Textiles
4.	Biomechanical Engineering of Functional Textiles
5.	Acoustics and Textile Sound Absorbers
6.	High-Performance Automotive Textiles
Open Electives - (Any one) (45 hours, 3 Credits)	
1.	Textile Design and Innovation
2.	Fashion and Textile Marketing
3.	Textile Recycling and Circular Economy:
4.	Textile Supply Chain Management
5.	Digital Textile Printing
6.	Innovative Textile Processing
7.	Hindi/ German/ Japanese/ French Language

Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	5
Basic Science	BS	1
Humanities Science	HS	1
Electives		
Professional Electives	PE	5
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	2
Industrial Project Work/Dissertation	PW/D	2
Lab		2
Total		**16 (T); 2 (L); 2 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; BS –**Basic Sciences**; HS-** Humanities & Social Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; IN-** Internship; **PW/D -** Industrial Project Work/Dissertation**; L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

7) MSc/Ms - Artificial Intelligence in Healthcare (Two-Year Programme)

Why is this programme distinct?	• Enables specialisation in innovative fields to **address persistent issues with healthcare technologies for students** from engineering, science and related fields. • Cultivates **expertise in artificial intelligence, data science, image processing, natural language processing, bioinformatics, medical device development, medical implants and biomedical instrumentation.** • Offers **elective courses focusing on various aspects of Artificial Intelligence in Healthcare**, providing students with diverse learning opportunities. • Develop an **understanding and proficiency in advanced computing techniques and tools.** • Equips students with the **skills to design and develop biomedical products** and processes at the systems level. • **Familiarizes students with real-world applications of AI** in healthcare. • Teaches techniques for **evaluating AI healthcare applications.** • Promotes **independent learning and fosters a commitment to lifelong learning through perception based on critical study of research publications.** • Instills an **understanding of professional and ethical responsibilities.**

Total Credits 80 Scheme

Semester I									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Artificial Intelligence in Medicine, Basics of clinical data, biomarkers, precision medicine	3	2	0	4	40	60	100	PC
	Design of Biomedical Devices and Systems	3	2	0	4	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Professional Elective II	3	0	0	3	40	60	100	PE
	Research Methodology and IPR	3	0	0	3	40	60	100	HS
	Applied Biostatistics with practical	0	0	4	2	60	40	100	EEC
	Diagnostics & Devices Laboratory	0	0	4	2	60	40	100	EEC
Total		14	2	8	21	320	380	700	
Semester 2									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Deep Learning	3	2	0	4	40	60	100	PC
	Clinical Implementations of AI including risk stratification, prediction analytics, modelling	3	2	0	4	40	60	100	PC
	Professional Elective III	3	0	0	3	40	60	100	PE
	Professional Elective IV	3	0	0	3	40	60	100	PE
	Entrepreneurship – Device Manufacturer / Hospital	3	0	0	3	40	60	100	HS
	Bio-techniques and Bio-instrumentation Laboratory	0	0	4	2	60	40	100	EEC
	Medical Image Analysis Laboratory	0	0	4	2	60	40	100	EEC
Total		15	2	8	21	320	380	700	

Semester 3									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Professional Elective V	3	0	0	3	40	60	100	PE
	Open Elective I	3	0	0	3	40	60	100	PC
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Project Work / Dissertation I	0	0	20	10	60	40	100	PW/ D
Total		9	0	20	19	180	220	400	
Semester 4									
Course Code	Course Title	Hours / Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
	Rehabilitation Technology	3	0	0	3	40	60	100	PC
	Cardiovascular Technology	3	0	0	3	40	60	100	PC
	Intelligent Implants and Surgical Instruments	3	0	0	3	40	60	100	PC
	Project Work / Dissertation II	0	0	20	10	60	40	100	PW/ D
Total		9	0	20	19	180	220	400	

Professional Electives - I (Any One) (45 hours, 3 Credits)	
1.	Linear model and Regression
2.	Ethical legal and social issues in AI
3.	Numerical Methods
4.	Statistical Forecast Evaluation
5.	Applied Optimization
6.	Mathematical Modelling and Simulation
Professional Electives -II (Any One) (45 hours, 3 Credits)	
1.	Computer Vision
2.	Introduction to Digital Signal Processing
3.	Machine Learning
4.	HPC and Cloud Computing
5.	Generative AI
Professional Electives - III (Any One) (45 hours, 3 Credits)	
1.	Bioinformatics
2.	Clinical Decision Support
3.	AI for Medical Time Series Data
4.	Biomechanics
5.	Medical Compliance of AI
Professional Electives - IV (Any One) (45 hours, 3 Credits)	
1.	Medical Robotics
2.	Computer-Assisted Surgery
3.	Microsystems Engineering
4.	Bio-signal Processing
Professional Electives - V (Any One) (45 hours, 3 Credits)	
1.	Neuro Technology
2.	Genetic Engineering
3.	Ophthalmic Technologies
4.	Bio-Nanotechnology
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives - (Any one) (45 hours, 3 Credits)	
1.	Programming of Microcontrollers
2.	Computer Graphics and Geometry Processing
3.	Digital Sustainability
4.	Internet of Things
5.	Ethical and Legal Issues
6.	Biosensors and Interfacing
7.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	8
Humanities & Social Sciences	HS	2
Electives		
Professional Electives	PE	5
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	4
Project Work/ Dissertation	PW/D	2
Total		**19 (T); 4 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; HS-** Humanities & Social Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW/D -** Project Work / Dissertation; **L –** Lecture**; T-** Tutorial**; P -** Practical**; Tot -** Total**.**

8) MSc/ Ms Biological and Computational Sciences (Five-Year Integrated Programme)

Why is this programme distinct?	1. **Bioinformatics**: Develops professionals proficient in synthesizing new bio components and drugs, aligning with the Make in India policy. 2. **Interdisciplinary**: Bridges Science, Engineering, Medicine, and Management disciplines within PSG Management institutions. 3. **Collaboration**: Partners with industry R&D labs, preparing students for the industry (Atma Nirbhar) and fostering MoUs with reputable Bioprocess R&D labs in India for research and training. 4. **Exposure**: Promotes semesterly visits to state-of-the-art labs on-campus and requires two major projects through internships in Bioprocess research labs, aiming for placements or higher studies abroad. 5. **Capstone Projects**: Offers projects in Semesters VIII and IX for applying Bioprocess Engineering concepts, considering market requirements, standards, safety measures, and cost. 6. **Conferences**: Facilitates student exposure to Bioprocess conferences and product exhibitions, showcasing cutting-edge developments. 7. **Evaluation**: Regulates project evaluations based on student presentations before committees of Bioprocess industry personnel, ensuring quality. 8. **Entrepreneurship**: Supports the grooming of entrepreneurs to establish start-ups with PSG STEP (Science and Technology Entrepreneur Park) in PSG Institutions. 9. **Character Development**: Addresses the training gap in graduates by offering in-depth courses in Personality and Character Development, Human Values, and Ethics.

Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester I									
	Calculus and Its Applications	3	2	0	4	40	60	100	BS
	English For Professional Skills	3	0	0	3	40	60	100	HS
	Medical Physics	3	0	0	3	40	60	100	BS
	Problem Solving and C Programming	3	0	0	3	40	60	100	BS
	Basics of Computational Biology	3	0	0	3	40	60	100	BIS
	Medical Physics Lab	0	0	4	2	60	40	100	BS
	Problem-Solving and C Programming Lab	0	0	4	2	60	40	100	BS
	Mathematical Foundations Lab	0	0	4	2	60	40	100	BS
Total		**15**	**2**	**12**	**22**	**380**	**420**	**800**	
Semester II									
	Transforms and Partial Differential Equations	3	2	0	4	40	60	100	BS
	Data Structures and Algorithms	3	0	0	3	40	60	100	PC
	Bioprogramming and Biostatistics	3	0	0	3	40	60	100	PC
	Plant and Animal Physiology	3	0	0	3	40	60	100	PC
	Molecular Cell Biology	3	2	0	4	40	60	100	PC
	Data Structures Lab	0	0	4	2	60	40	100	PC
	Bioprogramming and Biostatistics Lab	0	0	4	2	60	40	100	PC
	NSS/ NCC/ NSO/ Community Connect	0	0	2	0	0	0	0	EEC
Total		**15**	**4**	**10**	**21**	**380**	**420**	**800**	

Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester III									
	Biological Database Management system	3	0	0	3	40	60	100	BS
	Structural Bioinformatics and Precision Medicine	3	2	0	4	40	60	100	PC
	Epidemiology and Biostatistics Basics	3	0	0	3	40	60	100	PC
	Operating Systems	3	0	0	3	40	60	100	PC
	Immunology and Immunotherapy	3	2	0	4	40	60	100	PC
	Biological Database Management system Lab	0	0	4	2	60	40	100	PC
	Bioinformatics – Tools and Techniques Lab	0	0	4	2	60	40	100	PC
	Operating Systems Lab	0	0	4	2	60	40	100	PC
Total		**15**	**4**	**12**	**23**	**380**	**420**	**800**	
Semester IV									
	Computational Finance and Project Management	3	0	0	3	40	60	100	HS
	Unix and R Programming	3	0	0	3	40	60	100	BS
	Genomic Tools in Biomedical Research	3	0	0	3	40	60	100	PC
	Molecular Genetics, Genomics and Proteomics	3	0	0	3	40	60	100	PC
	Applied Microbiology and Bioprocess Engineering	3	0	0	3	40	60	100	PC
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Unix and R Programming Lab	0	0	4	2	60	40	100	PC
	Genetic Engineering Lab	0	0	4	2	60	40	100	PC
	Applied Microbiology Lab	0	0	4	2	60	40	100	PC
Total		**18**	**0**	**12**	**24**	**420**	**460**	**000**	

Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester V									
	Python for Bioinformatics	3	0	0	3	40	60	100	PC
	System Biology – Networks and Graph Theory	3	2	0	4	40	60	100	PC
	Biostatistics Advanced	3	0	0	3	40	60	100	PC
	Next Generation Sequencing	3	0	0	3	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Perl for Bioinformatics Lab	0	0	4	2	60	40	100	PC
	Network Analysis in Systems Biology Lab	0	0	4	2	60	40	100	PC
	NGS Lab	0	0	4	2	60	40	100	PC
Total		**15**	**2**	**12**	**22**	**380**	**420**	**800**	
Semester VI									
	AI & Information Visualization	3	0	0	3	40	60	100	PC
	Food Biosecurity	3	0	0	3	40	60	100	PC
	Molecular biology Principles (RTPCR, NGS, Sanger)	3	0	0	3	40	60	100	PC
	Omics Based Technology	3	0	0	3	40	60	100	PC
	Professional Elective II	3	0	0	3	40	60	100	PE
	AI & Information Visualization Lab	0	0	4	2	60	40	100	PC
	Bioanalytical Tools (HPLC, LCMS) lab	0	0	4	2	60	40	100	PC
	Medical Scientific Documentation Writing	0	0	4	2	60	40	100	PC
Total		**15**	**0**	**15**	**21**	**380**	**420**	**800**	
Semester VII									
	Project Work / Internship - I	**0**	**0**	**-**	**12**	**60**	**40**	**100**	**PW/ I**

Course Code	Course Title	Hours/ Week			Credits	Maximum marks			CAT
		L	T	P		CA	FE	Tot	
Semester VIII									
	Bioethics, Biosafety and IPR, GLP	3	0	0	3	40	60	100	PC
	Advanced Bioinformatics and Genome Sequencing	3	2	0	4	40	60	100	PC
	Machine Learning for Biology	3	0	0	3	40	60	100	PC
	Professional Elective III	3	0	0	3	40	60	100	PE
	Open Elective I	3	0	0	3	40	60	100	OE
	Data Analytics & Visualization Lab	0	0	4	2	60	40	100	PC
	Bioinformatics and Genome Sequencing Lab	0	0	4	2	60	40	100	PC
	Capstone Project I	0	0	4	2	60	40	100	EEC
Total		**15**	**2**	**12**	**22**	**380**	**420**	**800**	
Semester IX									
	Software and Hardware Security	3	0	0	3	40	60	100	PC
	Digital Image Processing and Computer Vision	3	0	0	3	40	60	100	PC
	Molecular Modeling and Drug Design	3	0	0	3	40	60	100	PC
	Professional Elective IV	3	0	0	3	40	60	100	PE
	Open Elective II	3	0	0	3	40	60	100	OE
	Digital Image Processing and Computer Vision Lab	0	0	4	2	60	40	100	PC
	Molecular Modeling and Drug Synthesis Lab	0	0	4	2	60	40	100	PC
	Capstone Project II	0	0	4	2	60	40	100	EEC
Total		**15**	**4**	**12**	**21**	**380**	**420**	**800**	
Semester X									
	Project Work / Internship - II	**0**	**0**	**-**	**12**	**60**	**40**	**100**	**PW/ I**

Professional Electives – (Any Four) (Each Elective - 45 hours, 3 Credits)
Biological Data Analysis
Algorithms for Molecular Dynamics Simulation
Genomics and Transcriptomics
Neuroscience and Technology
Biochemical Engineering
Bigdata Biology and Biological Databases
Comparative Genomics
Metagenomics
Population Genetics
Advanced Bioinformatics Programming
Functional Genomics
Cancer Genomics
Structural Biology and Molecular Modeling
Computational Immunology
Metabolic Modeling and Systems Biology
High-Throughput Sequencing Analysis
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)
Yoga, Cognition and Well-being
Contemplations from Yoga and Vedanta
Self-Awareness
Universal Human Values II
Lessons in Corporate Governance from IKS
Management Principles from Traditional Indian Knowledge Systems
Arthashastra and Governing Nation
Management Strategies from Panchatantra
Responsible Parenting
Rabindranath Tagore's Ideals of Education
Leadership from the Bhagavat Gita
Tirukkural and Emotional Maturity
Gandhi's Philosophy and the Quest for Harmony
Open Electives – (Any Two) (Each Elective - 45 hours, 3 Credits)
Computational Ecology
Environmental Bioinformatics
Human Genomics
Microbial Genomics
Protein Structure Prediction
Regulatory Genomics
Synthetic Biology
Microarray Data Analysis
Evolutionary Developmental Biology
Computational Proteomics
Neuroinformatics
German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Basic Science	BS	6
Biomedical Science	BIS	2
Humanities Science	HS	2
Professional Course	PC	24
Electives		
Professional Electives	PE	4
Open Electives	OE	2
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	3
Project Work / Internship	PW/I	2
Lab		21
Total		**43 (T); 21 (L); 3 (EEC(P))**

Total Credits : 200

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; BS –** Basic Sciences**; ; BIS –** Biomedical Sciences: **HS-** Humanities & Social Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** employability Enhancement Course**; MC –** Mandatory Course**; PW/I -** Project Work / Internship **L –** Lecture**; T-**Tutorial**; P-**Practical**; Tot-**Total**; SE-** Special Elective

9) MSc - Data Analytics in Social Policy (Two-year Programme)

Why is this programme distinct?	1. **Democracy and Data**: India's maturing democracy needs skilled analysts to provide real-time information, meeting the demand from firms specialising in data collection, analysis, and presentation. 2. **Insightful Analysis**: In the digital age, abundant data helps social scientists use quantitative methods to inform policy-making, and campaign strategies, and understand societal trends. 3. **Predictive Power**: Advanced statistical techniques and machine learning enable social scientists to predict public opinion shifts and policy impacts, aiding in strategic planning. 4. **Evidence-Based Policy**: Data analytics allows policymakers to evaluate the effectiveness of policies using demographic data, surveys, and modelling. This enhances transparency and accountability in decision-making. 5. **Interdisciplinary Approach**: The programme fosters collaboration among experts in computer science, statistics, and sociology, enriching the analytical process. 6. **Ethical Analysis**: Students learn to analyse data ethically, ensuring their work benefits society without infringing on individual rights and gaining practical skills for academia and society. 7. **Essential Programme**: This programme is crucial for researchers, policymakers, and organisations to effectively address societal challenges in today's complex social landscape.

Total Credits 80 Scheme

Semester 1									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Public Administration & Governance: Concepts and Theories	3	0	0	3	40	60	100	PC
	Social and Political Philosophy in India	3	0	0	3	40	60	100	PC
	Data and Society	3	0	0	3	40	60	100	PC
	Python for Data Analysis	3	2	0	4	40	60	100	PC
	Mandatory Elective (ME)	3	0	0	3	40	60	100	ME
	Data Analysis using Spreadsheets Lab	0	0	4	2	--	100	100	EEC
	Python Programming Lab	0	0	4	2	--	100	100	EEC
Total		15	0	8	20	200	500	700	

Semester 2									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Fundraising analytics and Campaign Finance	3	2	0	4	40	60	100	PC
	Diagnostics and Evaluation in Social Policy	3	0	0	3	40	60	100	PC
	Big Data and Social Strategy	3	0	0	3	40	60	100	PC
	Sustainable Development Analytics	3	0	0	3	40	60	100	PC
	Machine Learning for Social Policies	3	0	0	3	40	60	100	PC
	Social Media Analytics Lab	0	0	4	2	--	100	100	EEC
	Machine Learning Lab using any open-source software	0	0	4	2	--	100	100	EEC
Total		15	0	8	20	200	700	700	

Semester 3									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Leadership in Politics	3	0	0	3	40	60	100	PC
	Social Network Analytics	3	0	0	3	40	60	100	PC
	Electoral Data and Predictive Modeling	3	0	0	3	40	60	100	PC
	Social Behaviour Analytics	3	0	0	3	40	60	100	PC
	Professional Elective I	3	0	0	3	40	60	100	PE
	Data Visualization for Social Data Lab	--	--	4	2	--	100	100	EEC
	Computational Linguistics Lab	--	--	4	2	--	100	100	EEC
	Internship	0	0	4	2	--	100	100	IN
Total		15	0	12	21	200	600	800	

Semester 4									
Course Code	Course Name	Hours/Week			Credits	Maximum Marks			
		L	T	P		CA	FE	Total	CAT
	Data-driven approaches for Campaign and Advocacy	3	0	0	3	40	60	100	PC
	Social Impact Assessment and Evaluation	3	0	0	3	40	60	100	PC
	Open Elective I	3	0	0	3	40	60	100	OE
	Project Work	0	0	10	10	100	100	200	PW
Total		9	0	6	19	220	380	500	

Professional Electives - (Any one) (45 hours, 3 Credits)	
1.	Quantitative Techniques
2.	Advanced Statistical Methods for Policy Analysis
3.	Qualitative Analysis in Social Policy Implementation
4.	Geospatial Analysis for Social Policy
5.	Data Visualization for Policy Makers
6.	Econometrics for Policy Analysis
7.	Ethics and Data Privacy in Social Research
8.	Predictive Analytics in Social Services
9.	Policy Simulation and Modeling
10.	Criminal Justice Analytics
11.	Advanced Statistical Methods for Social Research
12.	Geographic Information Systems (GIS) for Social Policy
13.	Policy Evaluation and Impact Assessment
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives - (Any one) (45 hours, 3 Credits)	
1.	Data Analytics and Politics
2.	Political Communication
3.	Computational Text Analytics
4.	Managing Diversity and Inclusivity
5.	Survey Design and Analysis
6.	Ethics in Data Analytics
7.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	15
Electives		
Professional Electives	PE	1
Open Electives	OE	1
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	6
Internship	IN	1
Project Work	PW	1
Total		**20 (T); 6 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; IN-** Internship; **PW -** Project Work; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**

10) MSc - Women Wellness and Welfare Management (Two-year Programme)

Why is this programme distinct?	1. **Equips:** Students gain deep insights into women's health and psychology through interactive learning. 2. **Engages:** Experts from diverse fields within PSG Institutions enrich students' perspectives on women's well-being. 3. **Integrates:** Practical skill development sessions empower women to manage health and address mental wellness. 4. **Prioritizes:** Cultural sensitivity and inclusivity in programme materials and discussions cater to diverse needs. 5. **Fosters:** A supportive community environment thrives through networking and peer support. 6. **Provides:** Ongoing learning and support extend beyond the programme duration. 7. **Empower:** Students advocate for women's health and rights in their communities and workplaces. 8. **Addresses:** The gap in training for roles like 'Women Welfare Officer' as identified by the National Career Service is targeted.

Total Credits 80 Scheme

Course code	Course title	Hours/week			Credit	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
SEMESTER 1									
	Basic Health Sciences	3	0	0	3	40	60	100	BS
	Anatomy of the female reproductive system	3	0	0	3	40	60	100	BS
	Physiological development of women and its impact on health across the life course	3	0	0	3	40	60	100	BS
	Physiology of pregnancy and lactation	3	0	0	3	40	60	100	BS
	Basics of Mental Health - I	3	0	0	3	40	60	100	PC
	Preparing a diet plan for a schoolgirl and adolescent girl as per social customs	0	0	4	2	60	40	100	PC
	Asanas and Pranayama – Level I	0	0	4	2	60	40	100	PC
	Physical fitness – Cardiac and weight training – level I	0	0	2	1	60	40	100	EEC
Total		**15**	**0**	**10**	**20**	**380**	**420**	**800**	
SEMESTER II									
Course code	**Course title**	**Hours/week**			**Credit**	**Maximum Marks**			**Category**
		L	**T**	**P/C**		**CA**	**FE**	**Total**	
	Pregnancy complications	3	0	0	3	60	40	100	PC
	Family planning methods /abortions and MTP-Social and legal aspects	3	0	0	3	60	40	100	PC
	Reproductive issues and hygiene	3	0	0	3	60	40	100	PC
	Basics of Mental Health - II including eating disorders, postpartum depression and psychosis	3	0	0	3	60	40	100	PC
	Professional Elective I	3	0	0	3	60	40	100	PE
	Physical fitness – Cardiac and weight training – level II	0	0	2	1	40	60	100	EEC
	Asanas and Pranayama – Level II	0	0	4	2	40	60	100	PC
	Preparing a diet plan for a pregnant/lactating mother as per social customs	0	0	4	2	40	60	100	PC
Total		**15**	**2**	**10**	**20**	**420**	**380**	**800**	

SEMESTER III									
Course code	Course title	Hours/week			Credit	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Non-Communicable Diseases: Endocrine and metabolic diseases in women, cardiovascular disease risks in women	3	0	0	3	60	40	100	PC
	Non-Communicable Diseases: Preventive oncology	3	0	0	3	60	40	100	PC
	Open Elective I	3	0	0	3	60	40	100	OE
	Mental health and women	3	0	0	3	60	40	100	PC
	Mandatory Elective	3	0	0	3	60	40	100	ME
	Physiotherapy assessment and care of women with pelvic floor disorders, joint disorders and abdominal wall disorders	0	0	4	2	40	60	100	PC
	Meditation techniques, including Yoga Nidra	0	0	4	2	40	60	100	PC
	Resistance training techniques	0	0	4	2	40	60	100	PC
Total		**15**	**0**	**8**	**21**	**420**	**380**	**800**	

SEMESTER IV									
Course code	Course title	Hours/week			Credit	Maximum Marks			Category
		L	T	P/C		CA	FE	Total	
	Open Elective II	3	0	0	3	60	40	100	OE
	Professional Elective II	3	0	0	3	60	40	100	PC
	Urogynaecological issues including menopause	3	0	0	3	60	40	100	PC
	Woman Help Project Work	0	0	20	10	40	60	100	PW
Total		**9**	**0**	**20**	**19**	**220**	**180**	**400**	

Professional Electives - (Any Two) (45 hours, 3 Credits – Each Subject)	
1.	Social and Cultural Determinants of Women's Health
2.	Inheritance of Wealth
3.	Adoption – Legal and Psychological aspects
4.	Marriage and Divorce- Legal aspects
5.	Caring for the Unborn Child
6.	Care of the Newborn
7.	Maintaining Work-Life Balance
8.	Ayushman Bharat and other Healthcare Insurance
9.	Breaking the Glass Ceiling – a Sociologist's Perspective
10.	Gender and Health
11.	Adolescent Health
12.	Nutrition and Health
13.	Women's Health - Public Health perspective
14.	National Programmes for Women in India and SDGs
15.	Substance Abuse
16.	Nurturing Emotional Intelligence and Leadership, Time Management
17.	Child Rearing Practices
Mandatory Electives - Inner Harmony - (Any One) (45 hours, 3 Credits)	
1.	Yoga, Cognition and Well-being
2.	Contemplations from Yoga and Vedanta
3.	Self-Awareness
4.	Universal Human Values II
5.	Lessons in Corporate Governance from IKS
6.	Management Principles from Traditional Indian Knowledge Systems
7.	Arthashastra and Governing Nation
8.	Management Strategies from Panchatantra
9.	Responsible Parenting
10.	Rabindranath Tagore's Ideals of Education
11.	Leadership from the Bhagavat Gita
12.	Tirukkural and Emotional Maturity
13.	Gandhi's Philosophy and the Quest for Harmony
Open Electives - (Any Two) (45 hours, 3 Credits - Each Subject)	
1.	Lifestyle Modification and Health
2.	Clinical Research
3.	Bioethics
4.	Pharmacy for Beginners
5.	Stress Management
6.	Ethical, Cultural & Constitutional Values
7.	Financial Literacy
8.	Self-Defense
9.	Entrepreneurship
10.	Social Media Skills
11.	Basics of Research Methods and Ethics
12.	Transgender –Health and Other Issues
13.	Hindi/ German/ Japanese/ French Language

Category of Courses

Category of courses		Number of Courses
Professional Course	PC	9
Basic Science	BS	4
Electives		
Professional Electives	PE	2
Open Electives	OE	2
Mandatory Electives	ME	1
Employability Enhancement Course	EEC	2
Project Work	PW	1
Lab		7
Total		**19 (T); 7 (L);2 (EEC(P))**

Total Credits : 80

CA – Continuous Assessment**; FE -** Final Examination**; CAT –** Category**; BS –**Basic Sciences**; PC –** Professional Core**; PE -** Professional Elective**; OE-**Open Elective**; EEC –** Employability Enhancement Course**; ME –** Mandatory Elective**; PW -** Project Work; **L –** Lecture**; T-**Tutorial**; P -** Practical**; Tot -** Total**.**