

## PART-1 (Registration)

### 1. Details of applicant Sponsoring body (Trust / Society/Company):

<b>Basic Details :</b>			
<b>Name :</b> Madhav Institute of Technology and Science	<b>Address :</b> Gola Ka Mandir	<b>State :</b> Madhya Pradesh	<b>City :</b> Gwalior
<b>Contact Details of the Authorities of the Institution :</b>			
<b>Name of Vice Chancellor/Director :</b> Dr. R K Pandit	<b>Email :</b> director@mitsgwalior.in	<b>Mobile :</b> 9826254902	<b>Contact No. :</b> 07512409300
<b>Name of Nodal Officer of Institute :</b> Dr. Pratesh Jayaswal	<b>Email :</b> pratesh_jayaswal@mitsgwalior.in	<b>Mobile :</b> 9826561725	<b>Contact No. :</b> 07512409231
<b>Details of applicant Sponsoring body (Trust / Society/Company):</b>			
<b>Name of the Sponsoring body :</b> The Scindia Engineering College Society, Gwalior	<b>Address of the Sponsoring body :</b> Gola Ka Mandir, Gwalior	<b>State :</b> Madhya Pradesh	<b>City :</b> Gwalior
<b>Details of Secretary of Sponsoring body:</b>			
<b>Name :</b> Mr. Ramesh Agrawal	<b>Designation :</b> Gola Ka Mandir, Gwalior	<b>Email :</b> rameshagrawalexmla@gmail.com	<b>Mobile :</b> 9425115111
<b>Contact No :</b> 07512436800	<b>Fax :</b> 07512409300	<b>Address :</b> Race Corse Road, Gola Ka Mandir, MITS Campus, Gwalior	<b>Upload supporting document for Sponsoring Body:</b> <a href="#">View Document</a>

### 2. Details of the Deemed to be University:

<b>Name of the Deemed to be University :</b> Madhav Institute of Technology and Science	<b>Address &amp; location of the Deemed to be University :</b> Gola Ka Mandir						
<b>Name and details of the Institution/Institutions which will form the Deemed to be University :</b>							
<table border="1"><thead><tr><th>NAME OF INSTITUTE</th><th>HEAD EMAIL</th><th>TYPE</th></tr></thead><tbody><tr><td>Madhav Institute of Technology and Science</td><td>director@mitsgwalior.in</td><td></td></tr></tbody></table>	NAME OF INSTITUTE	HEAD EMAIL	TYPE	Madhav Institute of Technology and Science	director@mitsgwalior.in		
NAME OF INSTITUTE	HEAD EMAIL	TYPE					
Madhav Institute of Technology and Science	director@mitsgwalior.in						

## PART-2 (Submission of application)

1. A Detailed Project Report (DPR) containing its fifteen year detailed Strategic Vision Plan and a five year rolling implementation plan viz. Academic Plan, Faculty Recruitm Plan, Students Admission Plan, Research Plan, Networking Plan, Infrastructure development Plan, Finance Plan, Administrative Plan, Governance Plan, etc, with clear annual milestones and action plans on how the new Institution Deemed to be University is to be set up, with identifiable outputs and outcomes :

# Detailed Project Report (DPR) for The Grant of Deemed to be University under De-Novo Category

Submitted to  
University Grants Commission (UGC)  
New Delhi



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## Introduction

- Madhav Institute of Technology & Science (MITS), Gwalior was established in 1957 by His Highness Sir Jiwaji Rao Scindia, Maharaja, of the erstwhile state of Gwalior under open door policy of Govt. of India.
- The Foundation Stone of the Institute building was laid by the then President Dr. Rajendra Prasad, on 20<sup>th</sup> October, 1956 and subsequently, established in 1957.
- The building of Institute was inaugurated by the then President of India Dr. S. Radhakrishnan, on 11th December, 1964.
- On the occasion of Golden Jubilee Celebrations, the then president of India, Dr. Pratibha Devi Singh Patil graced the occasion as Chief Guest on 30<sup>th</sup> June, 2008. A commemorative Postal Stamp with first day cover of the institute was also released by department of Posts, India on this occasion.
- Madhav Institute of Technology & Science (MITS), Gwalior run by the Scindia Engineering College Society, is a UGC Autonomous, NAAC Accredited, state government grant-in-aid institute, affiliated to RGPV, Bhopal. It is situated in the northern part of Madhya Pradesh.
- The institute has a lush green, campus spread in 44.6 acres.
- The Institute started with 3 disciplines; Civil, Mechanical and Electrical Engineering with a total intake of 120. Now, there are 17 under graduate and 10 post graduate Programmes in Engineering & Technology, Architecture & Planning, Computer Application and Management with a total strength of approximately 5000 students. There are about 100 Ph.D. scholars in different disciplines.
- As per the vision of the institute, " To create world class quality Engineers and Technocrats capable of providing leadership in all spheres of life and society ", the institute is committed to achieve and maintain quality through several different initiatives and endeavors. The mission is to maintain a dynamic approach and constantly upgrade & update efforts to fulfil stakeholder expectations in the ever changing global technological scenario.
- The NPTEL local Chapter of the institute ranked 2nd across the nation during January-April 2022 session. with AAA rating.
- The institute is listed in 251-300 band of NIRF -2021, promising band of ARIIA-2021 and is ISO 9001:2015 compliant. Many of the programmes are accredited by NBA.
- It is a recognized Centre of the Quality Improvement Programme (QIP) of AICTE for Ph.D. Programmes.
- The Institute has implemented TEQIP-II & TEQIP-III successfully and was declared as the best performer in the final performance audit.
- Offering 27 UG & PG degree courses along with Ph.D. in various disciplines.
- Institute is a QIP center of AICTE for Ph.D. programme under QIP & NDF schemes.
- DST established Entrepreneurship Development Cell, since 1988.
- Academic autonomy is granted by Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal, since 2002.
- UGC has granted academic autonomy to the institute for a period of six years w.e.f. July 2017.
- Institute is NAAC Accredited and few programmes are NBA Accredited.
- Institute has successfully completed TEQIP Phase-II & Phase-III project of MHRD, Govt. of India.
- Institute houses on-campus training Center of SKF India Pvt. Ltd & IBM India Pvt. Ltd..
- Institute is also an A-VIEW Resource Center of IIT-Bombay and IIT Kharagpur under MHRDs National Mission on Education through ICT.
- Established first Drone School of Madhya Pradesh in collaboration with Indira Gandhi Rashtriya Uran Akademi (IGRUA), Amethi.
- MoUs and Collaborations with Industries & Research Organizations (Annex-II).
- Promoting Research in core & emerging areas (Annex-III).
- Institute is Corporate Partner of International Civil Aviation Organization (ICAO), Montreal, Canada for TRAINAIR PLUS Programme.
- Completed various Research & Development projects supported by AICTE, DST and other funding agencies.
- The institute has implemented National Educational Policy (NEP-2020) for holistic & multidisciplinary education.
- MoU with Foundation for Innovation & Research in Science & Technology (FIRST), IIT Kanpur to enable, promote and incubate new technology/knowledge/innovation based start-ups, building a vibrant start-up ecosystem.

## Vision, Mission & Branding Statement

### Vision

**"To create world class quality Engineers and Technocrats capable of providing leadership in all spheres of life and society "**

### Mission

- To provide quality education in technical and allied disciplines.
- To organize and arrange innovative courses in Engineering and Technology.
- To arrange vocational courses in the upcoming fields and innovative subjects to meet global advancement.
- To promote research in the fields of Technology and Science

### Branding Statement

**"Mission to Innovate Technology for Society"**

## Values Framework

To promote the following core values among the HEIs of the country:

- Contributing to National Development
- Fostering Global Competencies among Students
- Inculcating a Value System among Students
- Promoting the Use of Innovative Technologies in Teaching Learning
- Quest for Excellence

## The Society

Institute is managed by The Scindia Engineering College Society (SECS) which is registered under the Societies Registration Act No. 53 of 1950 (no. 337 of 1956). The Promoter of the society was His Highness Lt. Gen. Maharaja Sir Jiwaji Rao M. Scindia, Maharaja of Erstwhile State of Gwalior in 1956.

The society is established to provide first class engineering college at Gwalior and to run, manage and administer the same. The registered office of the office is situated at Gwalior, Madhya Pradesh.

## The constitution of sponsoring Body

Shri Jyotiraditya M. Scindia, Minister of Civil Aviation & Minister of Steel, Government of India	Chairman
Shri A.K. Bajoria, President & Director, J.K. Tyres & Industries Ltd.,	Vice Chairman
Prof. K.K. Aggarwal, Ex- Chairman, NBA, Former Vice Chancellor Guru Gobind Singh Indraprastha University,	Member
Shri Prashant Mehta, I.A.S., Former Director General, Academy of Administration, Bhopal	Member
Prof. D.P. Agrawal, Ex-Chairman, UPSC of India,	Member
Shri Mahanaaryaman J. Scindia, Associate at Boston Consulting Group	Member
Shri V. Bapna CA, V. Bapna & Company,	Member
Smt. Ujjawala Phalke, Gwalior	Member
Er. Ramesh Agrawal, Former MLA	Member Secretary

### Governing Body

The Institute functions under the chairmanship and guidance of the Shri Jyotiraditya M. Scindia, Educationalist and other BoG Members.

Shri Jyotiraditya M. Scindia, Minister of Civil Aviation & Minister of Steel, Government of India	Chairman
Shri A.K. Bajoria President & Director J.K. Tyres & Industries Ltd.,	Member
Prof. K.K. Aggarwal Ex Vice Chancellor Guru Gobind Singh Indraprastha University, New Delhi.	Member
Prof. D.P. Agrawal Ex-Chairman, UPSC of India, New Delhi.	Member
Shri Prashant Mehta, I.A.S Former Director General, Academy of Administration, Bhopal.	Member
Shri Pashupathy Gopalan, President Asia Pacific & GCC, SunEdison Inc, Mumbai (Maharashtra)	Member
Shri Yuvraj Mahanaaryaman J. Scindia, Associate at Boston Consulting Group	Member
Er.Ramesh Agrawal Ex MLA, Gwalior.	Member
Er. Lokesh Saxena MD, DISA India Ltd Kushal Garden Arcade, Bangalore.	Member
Prof. Sunil Gupta Vice Chancellor Rajiv Gandhi Proudgiki Vishwavidyalaya, Bhopal	Member
Director Directorate of Technical Education, M.P. Govt. Bhopal	Member
Member Secretary All India Council for Technical Education, New Delhi.	Member
Principal Secretary Department of Manpower Planning & Technical Education, M.P. Government, Vallab Bhawan, Bhopal.	Member
Principal Secretary Department of Finance, M.P. Government, Vallab Bhawan, Bhopal.	Member
Joint Secretary, University Grant Commission,	Member
Faculty representative nominated by the Director	Member
Dr.R.K. Pandit, Director, MITS, Gwalior.	Member Secretary

## Sub Committees of the Board

- ? Executive Committee
- ? Finance Committee
- ? IT & IR Committee
- ? H.R. Committee
- ? Alumni Interaction Committee

## Strength, Weakness, Opportunity and Challenges (SWOC)

SWOT analysis was carried out with the involvement of various stakeholders participation. All the important points related to SWOT were considered. Some of the important parameters taken into consideration for analysis were, teaching learning process, human resources, services, physical Resources, Finance and organization pattern along with its formalization procedures etc. The brain storming sessions in different groups were conducted to discuss the various parameters involving in the analysis of SWOT.

For the purpose of analysis, various comments received during discussions were analyzed and reported. In these various sessions, 72% students, 98% Faculty members and 80% supporting staff of various departments of the Institute participated. The outcome of the discussion during free flow of information is diagnosed and analyzed are reported below:

### Strength

- UGC autonomy and NAAC accreditation since 2017
- Autonomous under affiliated university since 2000
- A blend of eminent persons from society, administration, academia and industry, constitute the BoG who are closely associated with the development of the institute
- The vast alumni base of the institute
- The institute has effectively implemented the Flexible Curriculum for 2017-2021 batch onwards and integrated NEP-2020 parameters and provisions from 2020-2021 batch onwards.
- The examination reforms have been implemented and are in practice.
- The institute NPTEL Local Chapter ranked 2nd among 4500 Institutions in India in 2022
- The faculty is experienced, well qualified and the retention is good.
- The institute has a state-of-the-art digital studio to facilitate development of MOOCs by the faculty.
- A beautiful building, green & environmentally conscious campus and excellent academic/other infrastructure

### Weakness

- Financial constraints for removal of obsolescence & commencement of new demand based programmes/facilities.
- There is a need for strengthening industry collaboration for faculty training, conduction of corporate training programmes and industry sponsored research projects.
- Requirement of an auditorium, indoor sports facilities, & accommodation for students/staff
- Up-gradation of Networking of Campus

### Opportunity

- The path has been paved for acquiring the status of a 'degree granting autonomous institute'.
- Multiple mode teaching-learning-evaluation system is developed by the institute enabling attainment of higher order thinking skills (HOTs)
- Effective tapping of the huge alumni potential of the institute as off campus-resource persons for the institute internship programme and for strengthening the start-up activities
- The faculty is developing their own MOOCs. About 10 courses are ready to be launched
- Active participation in community development programme for regional needs
- Strengthening collaboration with local industry for student projects and learning
- Very good air & train connectivity with other parts of the country, particularly to the national capital

### Challenge



- To constantly update and upgrade curriculum, faculty skills and laboratory infrastructure to fulfil stakeholder/market needs
- The lack of exposure to new technology/facilities can become a hurdle for imparting high quality education to the students.
- Lucrative financial packages as well as facilities / resources provided by the private/foreign competitors can cause migration of good faculty members
- Due to fast changes in government policies (in education sector), new foreign universities, private universities are coming up, which will cause great challenges and competition.

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR |DPR|

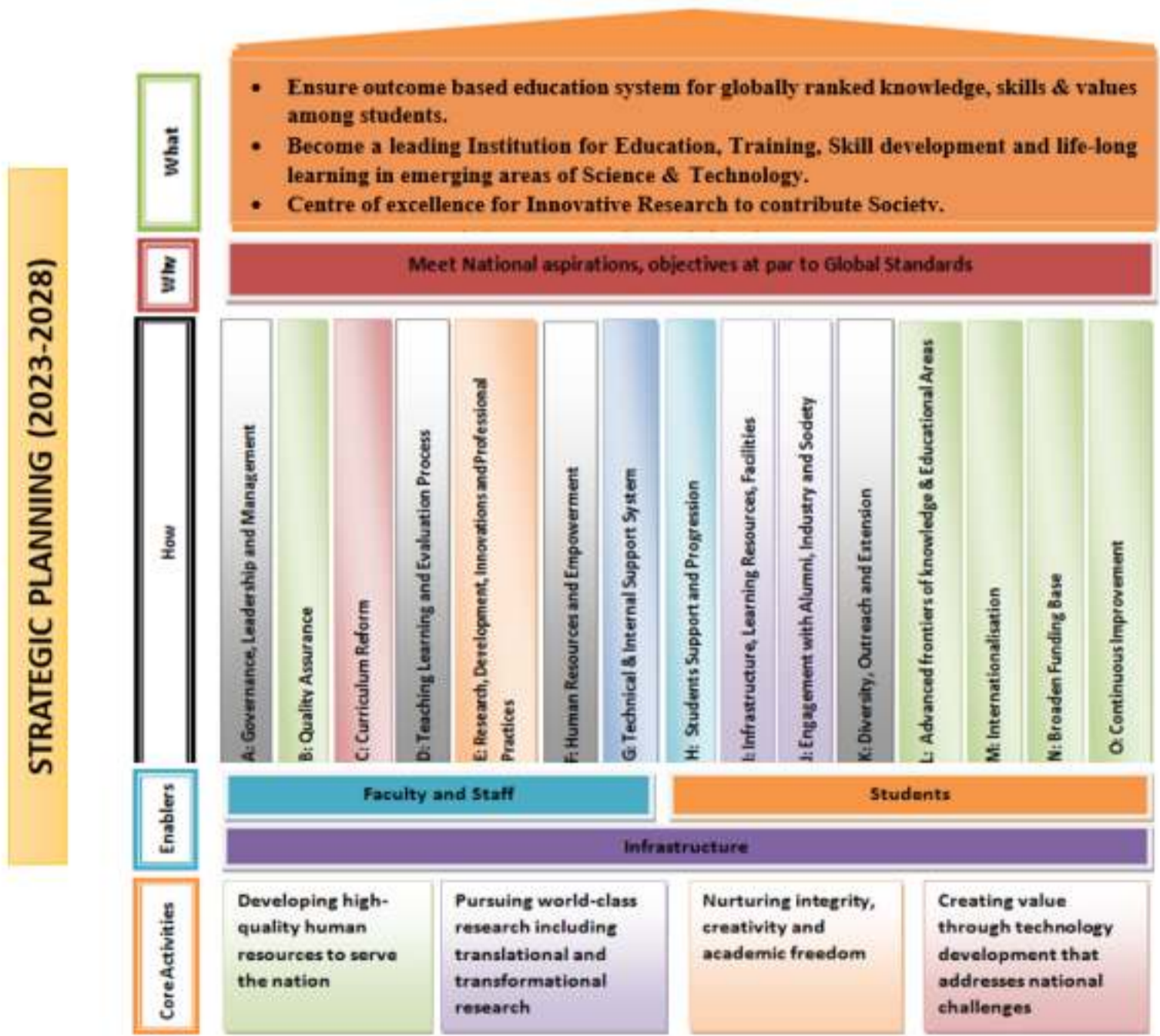
**Goals**

- Ensure outcome based education system for globally ranked knowledge, skills & values among students.
- Become a leading Institution for Education, Training, Skill development and life-long learning in emerging areas of Science & Technology.
- Centre of excellence for Innovative Research to contribute Society.
- Development of Infrastructure at par with International Standards.

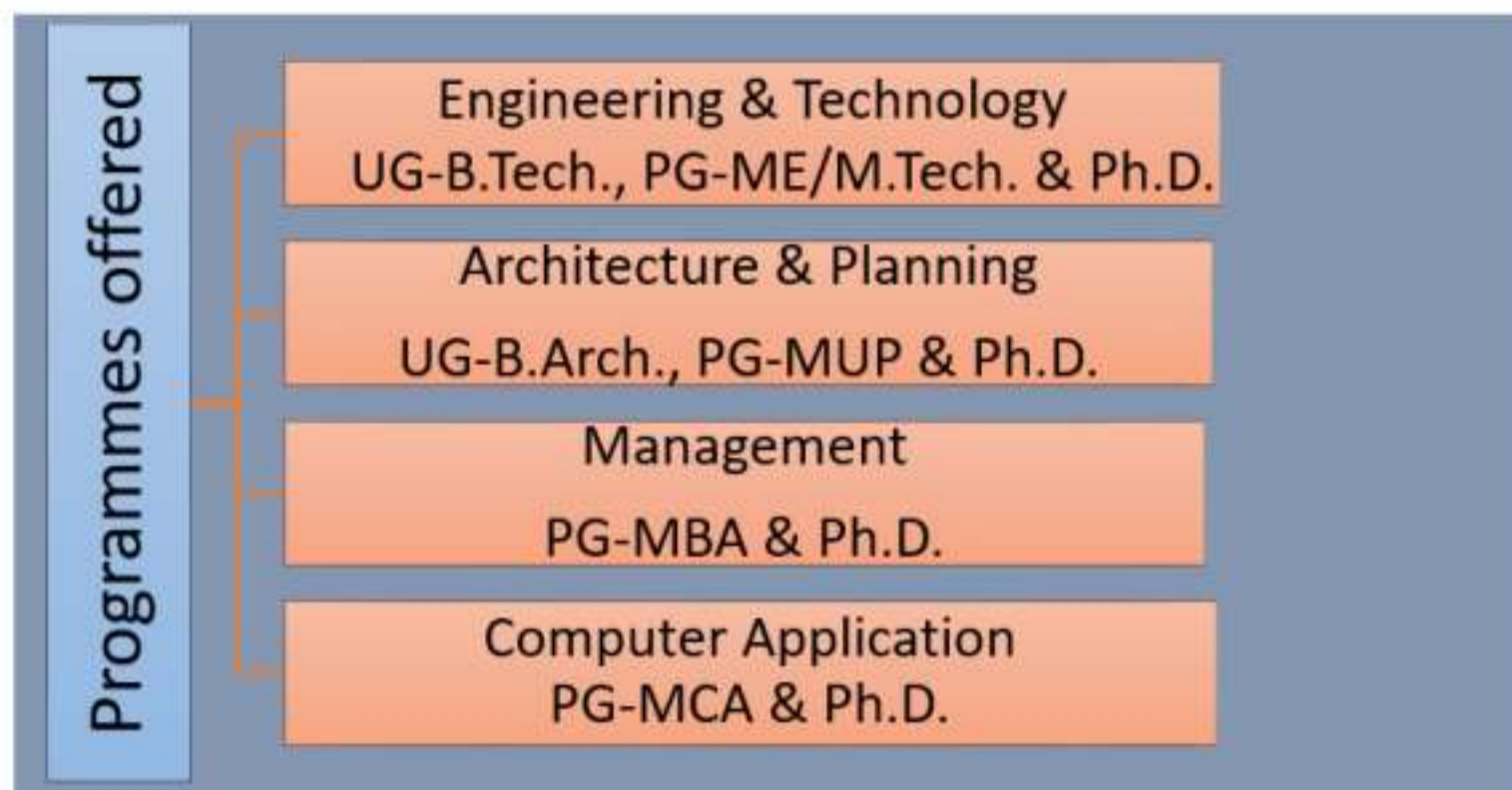
**Strategic Planning**

- Ensure outcome based education system for globally ranked knowledge, skills & values among students.
- Become a leading Institution for Education, Training, Skill development and life-long learning in emerging areas of Science & Technology.
- Centre of excellence for Innovative Research to contribute Society.
- Development of Infrastructure at par with International Standards.

**STRATEGIC PLANNING (2023-2028)**



## Programmes Offered



## UG & PG Courses

Degree Programmes	Year of Start	Intake as per AICTE
B.Tech. Civil Engineering	1956	120
B.Tech. Mechanical Engineering	1956	120
B.Tech. Electrical Engineering	1956	120
B.Tech. Electronics Engineering	1982	120
Bachelor of Architecture	1984	40
M.E. Construction Technology and Management	1986	25
Masters in Computer Applications	1986	60
B.Tech. Computer Science and Engineering	1994	120
M.E. Industrial System & Drives	1995	25
M.E. Communication Control and Networking	1995	25
B.Tech. Chemical Engineering	1996	60
B.Tech. Information Technology	2000	60
M.Tech. Production Engineering	2002	18
Masters in Urban Planning	2004	18
M.Tech. Computer Science & Engineering	2011	18
M.Tech. Information Technology	2012	18
M.Tech. Environment Engineering	2014	18
B.Tech. Electronics and Telecommunications Engineering	2015	60
B.Tech. Automobile Engineering	2015	60
MBA	2019	60
B.Tech. Information Technology (Artificial Intelligence and Robotics)	2020	60
B.Tech. Information Technology [Internet of Things (IoT)]	2020	60
B.Tech. Mathematics and Computing	2020	60
B.Tech. Electrical Engineering (Internet of Things)	2020	60
B.Tech. Artificial Intelligence (AI) and Data Science	2021	60
B.Tech. Artificial Intelligence and Machine Learning	2021	60
B.Tech. Computer Science and Design	2021	60

## QIP-AICTE Research Centre for Ph.D.

Ph.D. Degree Programmes	Year of Start	Intake as per AICTE
Civil Engineering	2011	02
Mechanical Engineering	2011	02
Electrical Engineering	2011	02
Computer Science & Engineering	2011	02
Architecture	2011	02

➤ The Institute also offer Ph.D. Programme in all the existing Engineering & Technology, MCA, Architecture & Planning and Management Disciplines as Research Cent RGPV Bhopal.

### MoUs and Collaboration with Industries & Research Organizations

- ABV-IIITM, Gwalior, under Abhigyan Abhikaushalam Students' Forum
- ACE Antenna, Hyderabad
- Aspen Tech., Pune
- Bennett University, Greater Noida
- Cancer Hospital and Research Institute, Gwalior
- Central Institute of Plastics Engineering & Technology (CIPET), Gwalior
- Central Road Research Institute, New Delhi.
- Centre for Research & Industrial Staff Performance (CRISP), Bhopal
- CII (Confederation of Indian Industry)
- Construction Industry Development Council (CIDC)
- CSIR- CBRI Roorkee.
- D'Auto Pvt. Ltd.,
- Delhi Technological University
- Department of Applied Science, ABV-IIITM, Gwalior
- Durvaa Informedia Fanchisee of Arena Animation, Gwalior
- Electronics and ICT Academy PDPM-IITDM, Jabalpur
- Eminent Biosciences, Indore
- Engipress Industries Limited, Gwalior
- FICCI (Federation of Indian Chambers of Commerce and Industry)
- Foundation for Innovation & Research in Science & Technology (FIRST), IIT Kanpur
- GitHub Campus Program
- Govt. Women Polytechnic College, Gwalior (GWPC)
- IBM India Pvt. Ltd.,
- IET (The Institution of Engineering & Technology)
- IG DRONES, Delhi
- IIT Gandhinagar
- India Solar Energy Consulting Pvt Ltd., Panipat, Haryana
- Indian Institute of Remote Sensing (ISRO)
- Indira Gandhi Rashtriya Uran Akademi (IGRUA)
- Infosys Ltd.,
- International Civil Aviation Organization, Montréal Canada
- International Development of Academic and Scientific Collaboration (AIDASCO), Novi Sad, Republic of Serbia
- Jiwaji University, Gwalior
- LUPIN, Laboratory Bhopal
- M.P.Police - Police Reforms, Madhya Pradesh
- M/S. Smart Controls India Limited, Gwalior
- Madhya Pradesh Poorv Kshetra Vidyut Vitaran Co Ltd., Jabalpur
- Madhya Pradesh Urja Vikas Nigam
- Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya, Citrakoot, Satna (MP)
- National Highways Authority of India (NHAI)
- PDPM, Indian Institute of Information Technology Design & Manufacturing, Jabalpur
- Police Training and Research Institute (PTRI) Bhopal, India
- Praedico Global R
- Sciencetech Technology Pvt. Ltd., Indore
- SKF India Limited., Pune
- Smart City, Gwalior
- Smart Control Pvt. Ltd., Malanpur
- Supercomputing Lab of Bennett University under Initiative "making Deep Learning and AI Skills Mainstream in India by Royal Academy of Engineering"
- Symbiosis International (Deemed University) Pune, Maharashtra, India
- University of Central Florida USA
- Vijaya Raje Govt. Girls P.G. College, Morar, Gwalior (M.P.).

## Alumni

The institute has strong alumni base. The alumni have served nationally and internationally at various prestigious positions like member of NITI Aayog, Chancellor and Vice Chancellor, Director of IITs, Director General, Indian Administrative Services, Indian Foreign Services, CEOs etc. Some of them have been conferred with prestigious awards like **Padma Bhushan** and **Padma Shree**.

## Prominent Alumni

- **Vijay Kumar Saraswat**  
Former DG of the Defence Research and Development Organisation (DRDO) and the Chief Scientific Advisor to the Indian Minister of Defence Calm Mind, an health app and platform focusing on Mental Wellbeing
- **Abhay Karandikar**  
Director of IIT Kanpur
- **Raghunath K Shevgaonkar**  
Professor Emeritus at Indian Institute of Technology, Bombay  
Former Director of IIT Delhi
- **N.K. Gupta**  
R & D in Aerospace propulsion, Cryogenics and Turbomachinery, ISRO Vadodara  
Ex Dy Director and Project Director Cryogenics Liquid Propulsion Systems Centre
- **P. S. Kulshrestha**  
Vice President at Gammon India Ltd Ghaziabad, Uttar Pradesh
- **K .K. Sharma**  
Executive Director NTPC ( 1981- 2009 )
- **Anil Kumar Lahoti**  
General Manager, Central Railway
- **Sarbjit Sahota**  
Disaster Risk Reduction Specialist at UNICEF India, TEDx Speaker
- **Sachin Agrawal**  
Senior Vice President – R & D and Technology, Volvo Eicher Commercial Vehicles
- **Puneet Pandey**  
Architect and Urban Planner at Vima- The Dimension
- **Apurva Yaduvanshi**  
Senior Manager | Payment Products Development | VISA
- **Sudhir Saxena**  
DGP of Madhya Pradesh  
Senior IPS officer
- **(Dr) P K Shrivastava**  
Air Vice Marshal
- **Gangaram Baderiya**  
Additional Chief Secretary to Government of Karnataka Backward Classes Welfare Department
- **Gaurav Behere**  
Senior Architect at Blue Yonder  
Member of Technical Staff PayPal · Full-time, Sen. Software Engineer- Cisco
- **Madhav Singh**  
Executive Director Technical at EverYondr
- **Saumitra Kaushal**  
Senior Software Engineer at Amazon
- **Anurag Shukla**  
Director at Ericsson India Private Limited
- **Krishna Agarwal**  
Lead Software Engineer at Meesho
- **Arun Kapoor**  
Former Engineering Executive at Ford Motor Company  
Education: Wayne State University, M.S. Engineering, Industrial Engineering (1966- 1967)
- **Tarun Kumar Khulbe**  
Director & COO at Jindal Stainless Ltd.
- **S. Manasvi**  
Filmmaker and writer
- **Shri Narendra Nahata**  
Chancellor Mandsaur University & Former Minister Commerce & Industry, Govt. of M.P

- **Vijay Kalra**  
Head - Mahindra Institute of Quality, Member-Group Corporate Office Leadership Team & Member - Central Safety Council Ex ED & CEO MVML and Chief of Mfg.Operations AD, Chair- ISQ Earth Forum
- **Mr. Basant Jain**  
Founder- Aplos Ventures Private Limited
- **Mr. Rahul Chaudhry**  
Ex CEO Tata Power SED
- **Lokesh Saxena**  
Managing Director- DISA India Limited, Norican Group, Denmark
- **Ishan Shankar**  
Former Chairman Committee of Directors CEO BHEL CMD NIDCMDMD
- **Vimal Kaushik**  
Former CEO & MD IL&FS Engg. & Const. Co. Ltd. (Maytas Infra Ltd.)  
Former MD, Punj Lloyd
- **Anand Bhanpurkar**  
Business Head- Distribution Transformers at CG Power and Industrial Solutions Ltd.
- **Praveen Kumar Gupta**  
General Manager (Central Procurement) at Aditya Birla Group
- **Dr. Tripta Thakur**  
Director General, National Power Training Institute
- **MAHESH CHANDRA GUPTA**  
Director General, GITM Group of Institutions
- **S. K. Jain**  
Chairman of the Governing Board of World Association of Nuclear Operators (WANO), Tokyo Centre. Chairman and Managing Director, Nuclear Power Corporation of India Ltd (NPCIL)
- **Keshav Jaiswal**  
Vice President, Global Client Experience at JPMorgan Chase & Co.
- **Pradeep Kumar Tambey**  
President | Tata Steel BSL (Formerly Bhushan Steel Ltd) ( 2018 )
- **Rakesh Atre**  
Associate Vice President at Munjal Showa Ltd
- **Santosh Kumar Mantri**  
Vice President- Sales & Commercial at Kadevi Industries Ltd
- **Pradeep Kumar Kulshrestha**  
Chief Operating Officer at J Kumar Infraprojects Ltd
- **Anoop Bhatnagar**  
President (India Chapter) at International Business Council of Australia

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## Milestones-A Journey towards Uniqueness

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1956

- Foundation stone laid by Dr. Rajendra Prasad, the President of India

1957

- Establishment of Madhav Engineering College, Gwalior
- Introduction of Civil, Mechanical & Electrical Engineering Programme at Bachelors Level with an Intake of 40 Each

1960

- Enhancement in Intake of the Three Programmes

1964

- Building Inaugurated by the President of India, Dr .S. Radhakrishnan

1965

- Introduction of PG and Ph. D Programmes

1966

- Construction of Two Boys Hostels

1974

- Madhav Engineering College renamed as Madhav Institute of Technology & Science

1978

- Construction of additional Boys hostel

1981

- Introduction of B.E Electronics Engineering

1982

- Introduction of M. Sc Applied Physics, Chemistry & Maths

1984

- Introduction of Architecture Programmes at Bachelors Level

1986

- Introduction of M.C.A Programme & M.E Construction Tech. & Management.

1987

- Implementation of approval of the courses by ACITE, New Delhi.

1988

- Establishment of Entrepreneurship Development Cell
- Inauguration of New Building for Electronics Department
- Addition of New Girls Hostel Building

1989

- Organized 5<sup>th</sup> State level Technical Exhibition.
- Addition of New learning Resource Centre

1990

- Addition of New Boys Hostel

1992

- Addition of Building for EDC

1994

- Construction of High Voltage Building

1995

- Introduction of B.E Computer Science & Engineering Programme
- Introduction of Industrial Systems and Drives & Computer, Communication and Networking Programmes at Masters Level

1996

- Introduction of B.E Chemical, ME CCN and ME ISD

1997

- Inauguration of Conference Hall

1998

- Addition of Class Rooms in Institute Building

1999

- Inauguration of New Building for Architecture Programme at Bachelors Level
- Establishment of Faculty Guest House

2000

- Introduction of Information Technology Programme at Bachelors Level

2001

- Great visionary H.H. Madhavrao Scindia takes over as Chairman of the Institute
- Institute coordinated ICTE- 2001 at Bhopal on behalf of Govt of MP.
- Inauguration of the New Institute Gate Complex
- Introduction of the Biotechnology Programme at Bachelors Level

2002

- Introduction of M. Tech Microwave Engineering. & M. Tech Production Engineering
- Institution got Academic Autonomy under RGPV in July 2002.

2003

- Accreditation of BE Civil, Mechanical , Electrical Electronics, Computer Science & Engineering & MCA by National Board of Accreditation (NBA) New Delhi
- Accreditation of BE Chemical, Information Technology and M.E. Computer Communication & Networking, Industrial Systems & Drives & Construction Technology & Management by National Board of Accreditation (NBA), New Delhi
- Establishment of Central Computer Centre with LAN /WAN
- Extension of Faculty Guest House
- Inauguration of ISTE Students Chapter by Chief Ministers of M.P & C.G. along with H.H. Jyotiraditya M Scindia

2004

- Introduction of Masters Courses- Urban Management and M.Tech (Biotechnology)
- Enhancement of Intake in B. Architecture Programme from 20 to 40
- Institute organized National Convention for students of Architecture (NASA)

2005

- Construction of Canteen and Students activity Centre

2006

- Extension of building infrastructure (Architecture, Electronics, CSE & Biotechnology)

2007

- Establishment of CTI, a DFID, UK & Govt of MP project.
- Celebrating 50 years of excellence in Technical Education
- Dedicating land for environmental cause (Madhav Van)

2008

- Foundation stone laid for Autonomy Cell and Extension of Architecture Department
- Postal stamp released to commemorate Institute Golden Jubilee by The President of India Dr. Pratibha Devisingh Patil

2009

- Credit Based Grading System Implemented

2010

- Approval for starting Masters Programme in Computer Science & Engineering
- Establishment of IBM Centre for Excellence

2011

- Inauguration of the CSE Building by H.H. Jyotiraditya M Scindia
- Institute selected for funding under the TEQIP-II Project of MHRD
- Approval for starting Masters Programme in Information and Technology
- Increase in intake for Bachelors Programme in Civil Engineering from 50 to 60
- Installation of 33kV substation in the campus

2012

- Established QIP Research Centre for Ph.D programmes in Civil, Electrical, Mechanical, Architecture & CSE

2013

- Accreditation of BE Civil, Mechanical, Electrical Electronics & Computer Science Engineering by National Board of Accreditation (NBA), New Delhi
- Introduction of Masters Programmes in Cyber Security & Chemical Engineering
- Enhancement of intake for Bachelors Programmes (Chemical Engineering from 30 to 60, Electronics Engineering from 60 to 120 and Mechanical Engineering from 65 to 120)

2014

- Introduction of Masters Programmes in Geo informatics and Environment Engineering
- Enhancement of intake for Bachelors Programme (Electrical from 65 to 120 & Electronics and Civil Engineering from 60 to 120)



- Commencement of Infosys Campus Connect Programme
- ISTE Students Chapter Received Best Student Chapter of M.P. & C.G. Award

## 2015

- Introduction of Automobile Engineering and Electronics & Telecommunication Engineering Programmes at Bachelors Level with an intake of 6
- Establishment of SKF reliability Centre

## 2016

- Addition of New Eight Storey Girls Hostel With Capacity to House 272 Girls
- Formation of IEEE Students Branch
- Formation of IET Students Chapter
- Six new class rooms, 6 new faculty chambers, 2 new labs were created by reorganizing and modifying the existing building space

## 2017

- Grant of Autonomy by University Grants Commission (UGC) for 6-years
- Accreditation by National Assessment and Accreditation Council (NAAC) for 5-years
- Institute Selected for Funding Under the TEQIP-III Project of MHRD
- Creation of a New Counselling Hall with a Sitting Capacity of 150
- MoU signed with CPRI-Central Building Research Institute for research and training
- Twinning agreement signed with Delhi Technological Univers Delhi
- Flexible curriculum developed and implemented; interdisciplinary learning through the provision of DEs/OCs/Honours degree/Mi specialization/Credit transfer through MOOC
- The P.G. (ISD) programme was accredited by NBA
- Establishment of the NPTEL local chapter
- Provision in curriculum for promoting a culture of self-learning among the students
- Constitution of IQAC for internalizing quality culture
- Development of a structured Academic Audit mechanism
- Development of a structured mechanism for earning credits for extra & co-curricular activities
- Pioneer at state level in starting an open-source learning management system
- On-line dynamic learning platform MOODLE established; effectively used for teaching-learning-evaluation
- The 1<sup>st</sup> Ted talks organized by the TEDx Club with the theme, TEDxMITSG "Manoeuvring Ingenuity to mark a step towards innovation"
- 60 student clubs/professional society chapters established for the holistic development of the students.
- The practice of conducting 'Orientation Programmes' for UG and PG students at the beginning of each semester initiated
- Restoration & renovation of the old conference hall
- Creation of a new counselling hall with a sitting capacity of 150
- Campus road development and surfacing
- Faculty Resource Centre was developed

## The Last Five Year Initiatives

### 2018

- NPTEL chapter appeared among the top 100 chapters at 87th and 25th position respectively in Jan-June and July-December sessions, in the first year itself
- Implementation of e-governance, computerization of administration and library
- Up-gradation of the IT and civil infrastructure, establishment of smart class rooms
- ‘In-house Summer Internship” to all the students of I year and II year was initiated
- Structured online stakeholder feedback collection & analysis system established
- Digitization of valuation, displaying Model Answer Sheets, Integrated valuation & On-line question paper feedback implemented
- Full Time Ph.D. Fellowships initiated and Research Associates (RAs) appointed
- Initiatives Taken for Increasing Effectiveness of Outcome Based Education (OBE)
- Conclave Centre was developed
- Commissioning of new 08 storey Boys’ Hostel Phase-I
- Development of Business Incubation Centre for catering the needs of Start-ups, Innovations, Entrepreneurship Cell and Design Centre
- Retrofitting and interiors of 07 Smart Class Rooms completed

2019	
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- 'MOOC development studio' was established with state-of-the-art recording and editing facility
- NPTEL chapter was listed at 46th and 31st position in Jan-June and July-December sessions respectively
- With conduction of the AICTE sponsored 1st International Conference on "Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology the ICSISCET conference series was launched
- Conduction of Second International Symposium on 'Sustainable Development Research in the Asia-Pacific' (In collaboration with RMIT University, Melbourne Australia)
- Dedicated research centre established in smart grid simulation lab with DST-FIST level 0 support
- The 1st Induction programme conducted for the First Year Students as per AICTE norms
- Funding under Collaborative Research Scheme (CRS) was received by 11 faculty members
- Online Finishing School Program initiated for final & pre-final year students, 15 modules developed for 734 students
- Development of 'MOODLE Working Index' to institutionalize the use of this platform
- On-line faculty feedback system and computation of 'Faculty Feedback Index' initiated
- e-Repository on MOODLE to store dissertations and project reports
- A 100kWp net-metered roof-top solar power plant installed with carbon sequestration capacity of about 6000 fully grown trees
- Compost plant and Sewage Treatment Plant (STP) were commissioned
- Roof-water harvesting, rain harvesting pits with bore pipes commissioned
- Library infrastructure upgraded and digital Library established
- Synthetic Basket Ball Court developed
- New Academic Block approved and expected to start functioning by 2023

2020	
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- 'Digital Teaching-Learning Action Plan' (customised using the PRAGYATA guidelines of MHRD, now MoE) prepared and implemented to handle the teaching-learning challenges during the COVID period
- NPTEL chapter appeared at 13th position in the annual listing with 61 course toppers and 581 elite certificates
- Trained over 1600 technical teachers of Madhya Pradesh for effective use of Digital Teaching-Learning platforms and practices during COVID-19 Pandemic
- Examination reforms implemented through an end-to-end, fully automated and transparent online system
- 'Nodal Centre of Virtual Labs', was established in association with IIT Delhi
- Exhaustive Action Plan for NEP-2020 was prepared
- AICTE sponsored 2nd International Conference on "Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2021) was organized
- The 2nd Ted talks organized by the Tedx Club with the theme: TEDxMITSG "Moving the Margins"
- Mechanism for computing Administrative Efficiency Index (AEI) was initiated for timely completion of quality practices
- The 'Innovative Research Scheme' was launched
- New UG Programmes in 'Mathematics & Computing', 'Artificial Intelligence & Robotics', and two batches of Internet of Things (IoT) were started
- New UG Programme in 'Master of Business Administration (MBA)' was started

2021	
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- U.G. programmes in Civil, Mechanical and Electrical Engineering were accredited by NBA
- NPTEL chapter listed at fifth position, with AAA grading, in top 100 chapters of India, with 89 course toppers and 604 elite certificates in January-December 2021
- Top rank among all the TEQIP-III funded institutes in the final performance audit
- Listed in 251-300 band of NIRF & as a promising institute in ARIIA-2021
- A pioneer in the state of Madhya Pradesh to award a 'Minor Specialization in computer Science' to 11 students and 'Honours in parent discipline' to 25 students, in addition to B.Tech degree in parent discipline
- 'Multiple Mode Teaching Learning Pattern' (MMTLP) was developed and implemented.
- "Multiple Mode Logical Pattern Examination (MMLPE)" System was developed and implemented for conducting end-term examinations with mode flexibility.
- Initiative taken for conduction of selected courses in collaboration with industry person
- Practice of conducting 'Faculty Induction Programme' for new recruits was initiated
- Conduction of "Novel Engaging Courses' for holistic development was initiated
- Mechanism created and practice of full 'final semester internship' was implemented
- Emphasis on 'continuous evaluation' initiated by increasing its weight
- 'Skill based mini projects' integrated under continuous evaluation
- Mandate provision of "Course Proficiency" integrated in the end semester evaluation
- 3rd International Conference on "Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2021) was organized
- 'Meritocracy Initiative' of the institute was initiated to award achievers
- New UG Programme in 'Artificial Intelligence and Data Science', 'Artificial Intelligence and Machine Learning' and 'Computer science and design 'were started
- Recruitment drive for appointing 45 quality faculty members
- 'Gwalior Drone Mela', a mega event was organised jointly with Ministry of Civil Aviation, Government of India, Government of Madhya Pradesh and Federation of Indian Chambers of Commerce & Industry (FICCI)
- Phase II of the Boy's Hostel structure completed

2022	
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- NPTEL chapter was listed at second position, with AAA grading, in top 100 chapters of India, with 147 star performers and 288 course toppers, in January-April 2022
- Total 12025 credits transferred so far for 243 courses offered to 1877 students till December 2022
- NPTEL chapter scored highest 65 number of 'Star Certificates' among all chapters in India, for July-December 2022
- Degree with Honours was awarded to 30 students and minor specialization in CSE to 03 students
- Number of documents (112) and citations (1277) in Scopus
- Full final semester internships were completed by students in software sector (50%), product development (20%), experimentation based (21%), testing work (6%) and hardware based (3%)
- Research Internship Programme started for pre-final year students
- In-house initiative to increase the faculty competencies in the upcoming areas
- MoU signed with Madhya Pradesh Police Training Research Institute, Bhopal to work on road traffic systems using AI, ML, IoT, and DS
- In Scopus 112 number of published documents and 1277 citations were listed
- 4th International Conference on "Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET-2021) was organized
- Hackathon-2022 was conducted in collaboration with Microsoft IDS Hyderabad, Cadre Design, Ansys and Dhiyotech
- Conduction of faculty feedback through the IMS mechanism was initiated
- Conduction of 'Skills Enhancement Program' for the pre-final year students
- 'NEP-2020 Action Plan' executed; out of the 22 targeted parameters for year 2024-2025, 20 achieved
- The exit survey index calculated using an 18-parameter feedback from passing out students increased from 2.97 in 2021 to 3.48 in 2022, on a scale of 4.0
- Recruitment drive for appointing 25 quality faculty members
- Registration portal for 'Novel Engaging Course (NEC)' developed
- Provision of 'Minor Degree in Research' approved by the Academic Council
- Faculty Quality Index (FQI) developed using 16 parameters and 51 sub-parameters to identify the need for upskilling and upscaling
- Academic Bank of Credits (ABC) scheme established
- Pedagogical targets were set by the BoG after conducting workshop on "Market Driven Analysis for Dynamic Curriculum Development
- The Institute celebrates 65 years of excellence in Technical Education

**The Distinctiveness of the Institute**

1. The NPTEL (National Project on Technology Enabled Learning) local Chapter of the institute has been appearing among the top 100 local chapters of the country since its inception in 2017. During the 2021 and January-April 2022 session, the chapter ranked 5th & 2nd across the nation respectively and secured AAA rating. Highest number of star certificates in the special category were earned in July-December 2022.

2. The institute has a state-of-the-art digital studio to facilitate development of online courses (MOOCs) and the institute is getting ready to launch the courses for other institutes.

3. Exhaustive NEP Action Plan (2020-2024) prepared and effectively implemented. Out of the 22 targeted parameters twenty parameters have already been undertaken; either completed or are being manifested through various endeavors.

4. Quality is a journey and the major and unique achievements by the institute during the last five years are

(i) **Indian Knowledge System**: to promote Holistic Education and Informal Knowledge the “**Novel Engaging Courses**” (to promote Holistic Education and Informal Knowledge) are the part of curriculum since 2020 admitted batch. As of now, more than 80 NEC Courses have been introduced, including Performing Arts, Physical Health, Health & Hygiene, Arts & Crafts, Language Skills, Home Science under the mentorship of faculty members. Details are shown in Annex-VIII.

(ii) **interdisciplinary learning and flexibility** through open elective courses

(iii) students can opt for **minor specialization in allied discipline and honors in parent discipline**

(iv) there is a provision of **full last semester internship** at industry/research organization, and

(v) credit transfer has been implemented through **online courses of IITs through MOOCs**

(vi) credits are assigned for **learning outside the classroom**

(vii) provisions for **course proficiency component**, and **course specific mode of exam** are provided

(viii) A dynamic teaching-learning-evaluation environment through a **functional MITS-MOODLE**

(ix) **In-house summer internship programmes**

(x) The provision of “**Skill Based Mini Projects**” is introduced in the laboratory courses to facilitate the attainment of higher order thinking skills (HOTS; Analyse, Evaluate, Create/Design) through activity based learning. The project topics are designed such that some tangible outcome is achieved in the form of a coding exercise, software package, short paper, hardware, new lab experiment design, analysis of results obtained in lab or through the use of collected practical data.

5. Addressing the strategic needs of the country, Institute has started following **emerging area programmes** during 2020- 2021:

- B.Tech. Information Technology (Artificial Intelligence and Robotics)
- B.Tech. Information Technology [Internet of Things (IoT)]
- B.Tech. Mathematics and Computing
- B.Tech. Electrical Engineering (Internet of Things)
- B.Tech. Artificial Intelligence (AI) and Data Science
- B.Tech. Artificial Intelligence and Machine Learning
- B.Tech. Computer Science and Design

5. There are **65 student clubs** on campus out of which about 10 clubs deal with **cultural, yoga, sports and games** activities exclusively.

6. **Preservation of the Environment**: The campus has only 33% built area and rest is green with total jungle area of about 20% with 3095 sq. meter of teak wood plantation. With more than 2100 trees, many varieties of birds, peacocks and parrots are part of the campus eco-system. The present solar power plant meets about 12.5% of the total demand and prevents about 1.20 Lac kilograms of CO<sub>2</sub> emission from the global atmosphere per year, which is equivalent to planting about 6000 fully grown trees. The soon to be added 280kWp plant will be a big step in environmental preservation. Sewage Treatment Plant, two waste to compost convertors and 12 water harvesting pits are also in place. Bio-disposable pits are established in the campus.

## 115 Years Strategic Vision Plan with 5 Year Rolling Implementation Plan

### Objectives of proposed deemed to be university

- To provide instructions, teaching and training in higher education, vocational and professional education and make provisions for research, innovation advancement and dissemination of knowledge as per dynamic environment to create higher levels of intellectuals with innovative abilities.
- To establish new courses institutions and courses as per the need of the community.
- To award degrees, diplomas, certificates and other academic distinctions on the basis of examination or any other method of evaluation.
- To provide meaningful learning opportunities to students of India and overseas.
- To set up collaborative provisions with foreign/international Universities to enable students of the University to leverage the advantages of faculty and students exchange, dual degree options and semester abroad programmes.
- To provide for higher education leading to excellence and innovations in such branches of knowledge as may be deemed fit, primarily at undergraduate, at post-graduate and research degree levels, fully conforming to the concept of University as defined herein.
- To engage in interdisciplinary/ multi-disciplinary/ trans-disciplinary teaching and research in addition to domain-specific specialization.
- To provide for high quality teaching and research recognized nationally and globally.
- To recognize, identify and foster the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student's holistic development.
- To provide multi-disciplinary and a holistic education across the sciences, engineering, technology, social sciences, arts, humanities, sports and other disciplines.
- To transform into Research Intensive University over a period of time.
- Focus on research and innovation by setting up start-up incubation centers; technology development centres; centres in frontier areas of research; greater industry-academic linkages; and interdisciplinary research including humanities and social sciences research.
- To provide flexible and innovative curricula which include credit-based courses and projects in the areas of community engagement and service, environmental education, value-based education, etc.

### Specific Objectives



1. To acquire the status of "A degree granting autonomous institute"/"deemed to be university".
2. To strive for improvement in Ranking and Accreditation.
3. To improve institutional visibility and peer perception via ensuring Quality education for the holistic development of students.
4. To promote outcome based Education through Flexible curriculum system, mentoring system and reforms in examination.
5. To start programmes in Industry Partnership (Industry based programmes).
6. To establish Incubation Center for start-ups and center for business/technology development, training and support.
7. To establish centers/laboratories for research to promote collaborative interdisciplinary research to promote vibrant research in the frontier areas.
8. To establish a calibration central certified by a National Agency.
9. To strengthen industry collaboration for internship/ placement and joint research.
10. To honour credits earned by an individual from various institutions /platforms through Academic Bank of Credit (ABC).
11. To enhance Alumni participation in the growth of the institute.
12. To start corporate training programmes/ short-courses for Industry persons.
13. To collaborate with foreign universities/student exchange programmes.
14. To build collaborations with research organizations/ prominent institutions for external mentorship.
15. To start multilevel diversified skill based courses.
16. To recruit high quality teachers and to provide support and motivation to existing teachers for Faculty Development activities.
17. To promote professional development of students through training and activities for the inculcation of team work, communication skills, leadership skills, time management skills, soft skills and to develop innovation/entrepreneurship and critical thinking.
18. To offer Vocational Courses.
19. To enhance interaction & linkages with industry, society, government/ non-government organizations to promote socially productive activities.
20. To contribute the society through research & development activities.
21. To establish CSR model to contribute to societal goals.
22. To promote NEP-2020 recommendations to enable and encourage high-quality multidisciplinary and cross-disciplinary teaching and research across fields through Cluster Institutions.
23. To promote publication of high quality research papers (SCI & Scopus), Patents & Copyrights by teachers.

## Academic Plan

## Academics at Institute

## ➤ Flexible Curriculum

The Institute has been granted academic autonomy from RGPV, Bhopal (State Technical University) since 2002 and UGC has also given the autonomous status from 2017. As a consequence, the curriculum is being revised on regular basis through the Board of Studies (BoS), which is confirmed by the Academic Council. The curriculum development is aligned with the local, regional, national and global needs and revision of curriculum also involves feedback from various stakeholders. The curriculum is dynamic and the courses are as per the current market and industrial need.

The institute has implemented Flexible Curriculum (as per the AICTE model curriculum) from the academic session 2017-18 onwards and the institute has also concluded its action plan for the effective integration of National Education Policy 2020, with focus on skill development, creativity, innovation and holistic development. The curriculum offers the provision of Minor Specialization and Honors by additionally earning 20 credits through SWAYAM/NPTEL platform based courses. These courses are approved by the respective BoS and offered to the students who are opting degree with honours or minor specialization. Moreover, the arrangement of Departmental Elective and Open Category courses through SWAYAM/NPTEL platform with credit transfer is in place and under this arrangement, the total number of 20,123 Credits have already been transferred to the transcript of students. To ensure the holistic development of students, Novel Engaging Courses (with the arrangement of four credits in the overall UG programme) in diversified areas have been included in the curriculum such as - Environment protection, Bhagwad Gita- An Introduction. The curriculum also recognizes attainments in the co-curricular activities through credits under its "Professional Development" component.

Further, to ensure that the students have the required domain knowledge, skills and attitude following factors are considered:

- (i) Reports of various reputed organizations like NASSCOM, Sustainable Development Goals by UN etc.
- (ii) Model curriculum prescribed by AICTE,
- (iii) Mapping with Program Outcomes (PO),
- (iv) Suggestions by industry experts and alumni,
- (v) Syllabi of various competitive exams like GATE, IES, etc. Curricula addresses the following national missions: Digital India (Incorporation of MOOCs & digital pedagogy in the curriculum), Unnat Bharat Abhiyan, Women Empowerment, and Skilling India (provision of Skill Based Mini Project) .

The provision to opt for Full Semester internship or major project in the final semester of UG programmes is in place. Many students have already completed their internships with good stipend and placement offer in the same industry after the internship.

The curriculum and relating practices are in line with the Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes. The curriculum also includes recent technologies and the opportunities existing at regional and global level with all necessary elements.

The Institute observes the attainments of PEO, PO& PSO for respective programmes which in turn relates to Vision and Mission of the Institution and Department as well. The outcomes as stated have been integrated in curriculum and displayed on the Institute website to facilitate access to various stakeholders, including the teachers and students.

- The Board of Studies proposes the curriculum. The syllabi are continuously updated in consultation with experts from industry, academia, alumni and students, taking advantage of the academic autonomy from the affiliating university since year 2002.
- The curricular structure is prepared after rigorous discussions and pedagogical workshops, both conducted in-house as well as with external experts. Keeping in mind the national and international needs, desired graduate attributes, and guidelines such as United Nation's sustainable development goals (UN-SDGs), a balanced structure is proposed.
- There are course committees at the department to address each vertical/sub-discipline. A structured feedback system is in place. The Board of Studies (BoS) meetings followed by the Academic Council meetings are conducted twice a year. Before the meeting, feedback on existing curriculum is collected from stakeholders.
- All faculty members are the members of the BoS along with nominated experts from the state, outside the state, alumni and industry persons.
- The points related to the institute policy are included and circulated by the Academic Development Cell (ADC).
- All the courses are developed by identifying the specific course outcomes, which are mapped with the POs and PSOs. Shortfall in POs the attainment is backtracked to identify gaps in COs and curriculum is accordingly revised or new courses are developed
- The provision of 'Professional Development' is made by assigning 02 credits, evaluated at the final semester, for extra & co-curricular activities.
- Professional Ethics, Gender, Human Values, Environment and Sustainability, Project Management, Disaster Management, Indian Constitution & Traditional Knowledge are mandatory audit courses.
- About 78 different optional courses are also offered in 'Novel Engaging Course' category.
- For preparing future ready engineers, courses such as Cyber Security, Intellectual property Rights, Data Science, Artificial Intelligence & Machine Learning are mandatory courses.
- Interdisciplinary learning and flexibility is already included through the provision of DEs/OCs/Honours degree/Minor specialization. Students can earn minor specialization & Honours degrees in addition to UG degree by earning 20 additional credits
- There is a provision of full VIII semester internship at industry/research organization for making them job ready.

### ➤ Teaching-learning and Evaluation

- In order to unburden the students from high stake end-term examinations, the weight of continuous evaluation is slowly being increased. Presently the ratio of continuous to end-term evaluation has been increased from 30:70 to 40:60.
- Continuous evaluation of theory course consists of 20% weightage to learning through quizzes and assignments, mini projects etc. and 10% each to two mid-semester examinations. To promote modern tool usage, laboratory courses have a "Skill Based Mini Projects" component with 20% weightage and the other 20% weightage is given to lab-work/sessional.
- The Learning Management System, MOODLE (Modular Object Oriented Dynamic Learning Environment) is effectively used by faculty and students of the institute for teaching, learning and assessment purposes providing a student centric 'any-time-any-where' format of learning.
- MOODLE is also very effectively used for continuous and online end term evaluation, setting MCQ based question paper and conduction of exam.
- The lecture plans are prepared according to the 'Multiple Mode Teaching Learning Pattern' (MMTLP) developed by the institute. The lecture plan reflects the mode and pedagogical methods of teaching.
- The "Digital Teaching-Learning Action Plan" was prepared during the COVID period by customizing the PRAGYATA guidelines of Ministry of Education, (then MHRD), New Delhi to the scheme, scope and needs of engineering education.
- Some Department Elective and Open Category Courses are offered through MOOC platform (NPTEL/SWAYAM) and credits are directly transferred.
- MITS is a NODAL center of Virtual Labs (An Initiative of Ministry of Education under the National Mission on Education through ICT) from 21st July, 2020 onwards in association with IIT-Delhi. Some experiments are conducted in virtual mode also.
- The Examination Control System is automated resulting in extensive improvement in the efficiency and transparency of the whole process. Valuation is conducted digitally and answer books are displayed to the students.
- The examination reforms based on 'Outcome Based Education' have been implemented. The end-semester evaluation for theory courses is conducted in multiple modes viz, Pen & Paper, Assignment plus Oral and Multiple Choice Questions.

### ➤ Student Support and Mentoring

- The institute curriculum and practices are designed to achieve all three domains of learning; knowledge, skills & attitudes.
- The first two domains are addressed through curriculum, pedagogy and various academic activities, working in well-equipped laboratories, skill based projects and assignments.
- For the development of a good attitude and behavior, ethical conduct, team spirit and soft-skills there is provision of activity based learning through focused courses, presentations, proficiency evaluation, group learning and various activities in the campus which are organized by the students.
- The Institute has established Students Development Cell for promoting and organizing extracurricular and co-curricular activities. There are 65 student clubs on campus which are active year the round.
- There is a practice of conduction of 'Orientation Programs' at the onset of semester to brief them on 14-specific points related to academic, extracurricular and career related activities to be conducted during the semester. Separate support and sessions are conducted for the lateral entry students to address the curriculum gaps for transition to the degree programme.
- The slow learners are identified by the course faculty and regular remedial classes, extra assignments and quizzes are conducted for slow learners. Similarly, support is provided to the fast learners also.
- The institute follows a 'Mentor-Mentee System'. Besides this, personal counselling is given to students through a full time, qualified professional Student Counsellor.
- A number of sports and cultural activities/competitions are organized by the institute every year wherein the students play an important role in planning and organizing the activity.
- The institution also has a transparent mechanism for timely redressal of student grievances. Students are represented in several academic & administrative committees of the institute.
- In-house internship programmes are conducted mandatorily for students in first year and second year while internship support is provided to the third year students on a need basis.

### The academic plan for the next fifteen years

The academic plan for the next fifteen years for following activities/process is prepared considering the SWOC analysis, requirement of Quality Assurance agencies and NEP-2020 recommendation for the Holistic, Multidisciplinary, Value Based Education and Flexibility to learners.

#### (a) Curriculum Reforms

(b) Examination Reform & Evaluation process

(c) Teaching Learning & Evaluation Process

**(a) Curriculum Reforms**

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	<a href="#">Curriculum Design &amp; Development</a>			Twice/Year	Dynamically
2	Introduction of new courses focused on employability/entrepreneurship/skill development			Introduced as open electives	Technology Based
3	Revision of Syllabus as per current Societal & Industrial Need			Twice/Year by conducting syllabus revision workshops	Continuous Improvement
4	Industry & alumni involvement in the program design and Curriculum			Direct & Indirect	Continues Improvement
5	A Balanced Structured Curriculum for attaining the Program Outcomes (POs) & Program Specific Outcomes (PSOs)			Implemented from 2017-18	Continues Improvement
6	<a href="#">Implementation of Academic Flexibility through Flexible Curriculum System</a>			Implemented from 2017-18	To be continued
7	Curriculum Enrichment via audit courses			Implemented from 2018-19	Dynamically
8	Implementation of Feedback System to collect feedback from Students, Teachers, Employer & Parents for Curriculum development			Through Online feedback mechanism	To be continued
9	Conduction of Value-added courses to impart transferable and life skills			Implemented from 2017-18	Need Based
10	Provision of Internship (in-house/Industrial) in every academic year of study			<a href="#">In-House Summer Internship Program started in 2017-18 for I year &amp; Industrial Internship is mandatory for II &amp; III Year students.</a> Provision of full semester Internship in final year with industry/ organizations	To be continued
11	Encouraging for Industrial Projects to solve the real time Industrial problems			Partial Financial Support for Industrial and Interdisciplinary projects	All Deserving

12	<p>Review &amp; Corrective measures on implementation of OBE:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mapping courses and the POs &amp; PSOs.</li> <li><input type="checkbox"/> Framing COs for every course.</li> <li><input type="checkbox"/> Availability of COs embedded in the syllabi.</li> <li><input type="checkbox"/> Course Articulation Matrix (Mapping of CLOs with COs) table.</li> <li><input type="checkbox"/> Program Articulation Matrix (Mapping of CLOs with POs) tables.</li> <li><input type="checkbox"/> Development of assessment tools and processes used to gather the data upon which the evaluation of Course Outcome is based.</li> <li><input type="checkbox"/> Attainment of Course Outcomes of all courses with respect to set attainment levels.</li> <li><input type="checkbox"/> Development of assessment tools and processes used for assessing the attainment of each of the POs &amp; PSOs.</li> <li><input type="checkbox"/> Evaluation of each PO &amp; PSO.</li> <li><input type="checkbox"/> Review and improvement in attainment levels of Cos, Pos &amp; PEOs.</li> </ul>	<p>The Cos, Pos and PSOs are prepared and revised as per NBA guidelines.</p> <p>The attainment level of each COs is evaluated and corrective measures are taken for improvement in attainment levels.</p>	<p>Continuous Improvement</p>
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### (b) Teaching Learning & Evaluation Process

Years	2023-2028	2028-2033	2033-2038	Status	Intervention
Academic Reforms: Adapting Cafeteria Approach against the existing Rice-Plate Approach					
1	Adherence to academic Calendar			100% adherence to academic calendar	To be continued
2	Learning Management System: Effective teaching with the use of e-learning resources, ICT tools & Institute <a href="#">MOODLE</a> , <a href="#">MOOCS</a> , <a href="#">SWAYAM</a>			Up to 100%	100%
3	Teaching-learning through ICT enabled classrooms & Smart Class rooms			100% classrooms are effective	100%
4	Pedagogical initiatives (real life examples, collaborative learning, ICT supported learning, interactive classrooms, e-resources & latest techniques)			Up to the level of 70%	100%
5	Effective Students mentoring system			Scheme is very effective since 2016	Enhance Effectiveness
6	Implementation of effective support system for weak students & to encourage bright students (identification, action taken, impact observed)			Up to 70%	100%
7	Student's feedback on teaching process and Corrective measures.			Online feedback system & actions accordingly. 02/Sem.	Enhance Effectiveness

9	Flexible Curriculum Scheme: - Core Courses - Electives and Open Elective Courses - Inter-Disciplinary Courses - Credit Transfer Provision for Online Courses including courses of foreign Universities - Industry training/Course Crediting - Add-on/Audit Course Crediting etc. -NEC Novel Engaging Courses Provision of minor specialization & Honors	<a href="#">Implemented</a> <a href="#">w.e.f 2017-18</a>	Enhance Effectiveness
10	Assuring Quality of assignment and its relevance to COs (to promote self-learning, survey of contents from multiple sources, assignment evaluation and feedback to the students, mapping with the COs)	Implemented	To be continued
11	Question paper analysis based on HOT & LOT and gap analysis & corrective measures.	Implemented	To be continued
12	Developing mechanism for students grievances about evaluation	Manual System	Online System
13	Digitization of Evaluation Process	Online Evaluation System has started w.e.f. 2017-18 as a pilot project & started as complete online evaluation from 2018-19	Complete Digitization
14	Digital Examination Process	Objective	Subjective
15	Innovative practices for Identification of students projects and allocation	Under Progress	100% Implementation
16	Classification and relevance of the projects and their contribution towards attainment of POs and PSOs	Under Progress	100% Implementation
17	Establishing Industry supported laboratories	SKF, IBM	01/ Program
18	Industry involvement in partial delivery of any regular courses for students	Under Progress	Effectiveness Enhancement

**(c) Examination Reform & Evaluation process**

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Implementing effective Process of internal semester question paper setting and evaluation (effective process of question paper setting, model answers, evaluation and its compliance)			Implemented	To be continued
2	Implementing effective system to ensure the questions from outcome/learning levels perspective			Implemented	To be continued

3	Implementing effective system to ensure evidence of COs coverage in class test/mid-term test.	Implemented	To be continued
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The Five Year Academic Plan

Following academic provisions which are already implemented in the Institute are considered for the preparation of Academic Plan for next five years (2023-2028):

- Multidisciplinary Education: Provision of Minor Specialization
- Choice and Flexibility: Provision of Honours
- Cross Disciplinary Thinking: Open Courses
- Online Education: Credit Transfer Through SWAYAM/NPTEL/ MITS MOOCs
- Accessibility and Flexibility: Blended Teaching Learning
- Holistic Education and Informal Knowledge: Novel Engaging Courses
- Skill Development and Creativity: Skill based Projects
- Facilitation of Proficiency Development, Natural Science & Skill courses and Mandatory Audit Courses in scheme of study & examination
- In-house Internships for skill development
- Industrial/External Working Exposure: Full semester Internship
- All Round Involvement/ Professional Development: Extra Curricular Activities in the Curricula
- Moving Away from High-stake Examinations (unburden the students): Continuous and Comprehensive Evaluation
- Humanities and Arts Integration with STEM: Mandatory Value based Courses
- Innovative/Multidisciplinary Research: Research Internship
- Industry Readiness: Industry Collaborative Courses
- Industry Partnership Programmes: Industry Collaborated Degree Programmes
- Industry Readiness: Vocational Courses
- Enrichment of Faculty and Staff knowledge: Facilitation of Training
- Innovative Teaching, Learning & Assessment: Criterion Based Grading
- Cross Disciplinary and Interdisciplinary Thinking, Innovation: Interdisciplinary Projects
- Entrepreneurship: Skill based Courses in Local/Regional Language & Start-up Activities
- Future Skill Areas and Innovative Domains: New UG Programmes in Diversified Domains as per Societal and Industrial Need
- Certificate Courses in Future Skill Areas and Innovative Domains
- Industry Executive Training: Courses for Industry Persons
- Outcome Based Education as per NBA guidelines
- Degree with Research to offer Flexibility and Choice
- Multiple Entry & Exit Option
- Academic Bank of Credit (ABC) for Accountability of Credits Earned Through Various Platforms
- Open Distance Learning (ODL): provision for Courses and Grades Acquired Through Distance Learning

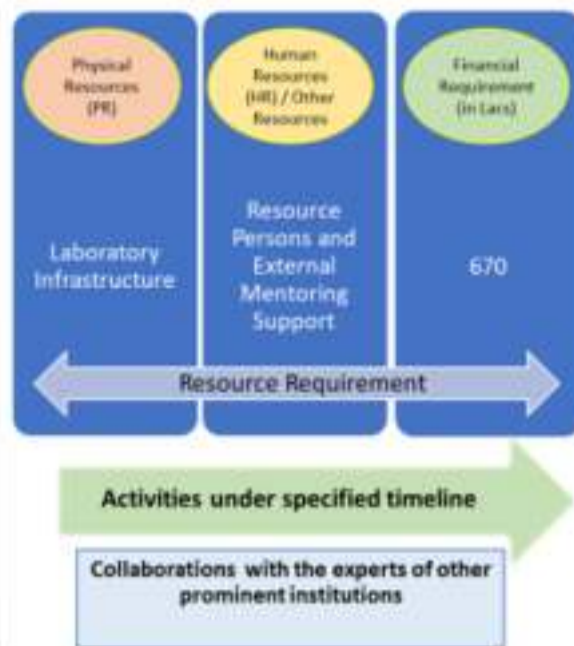
Attributes	Strategies
<b>Multidisciplinary Education</b>	<b>Provisioning of Minor Specialization through additional credits</b>

### Multidisciplinary Education: **Minor Specialization**

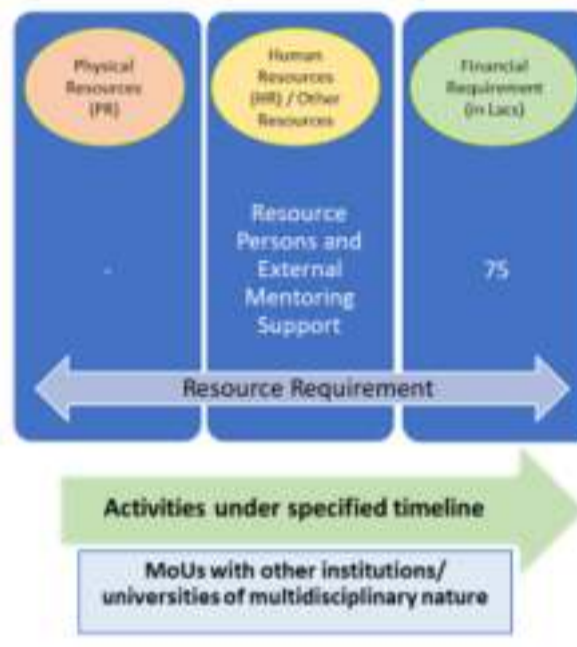




**Choice and Flexibility: Honours**

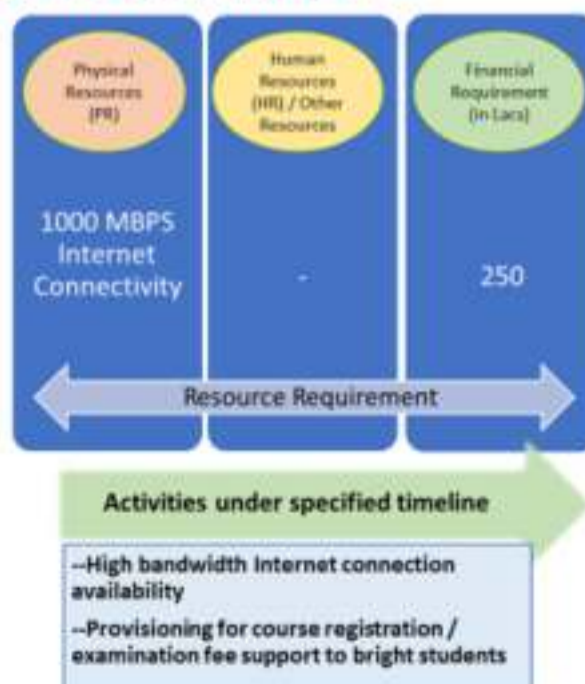
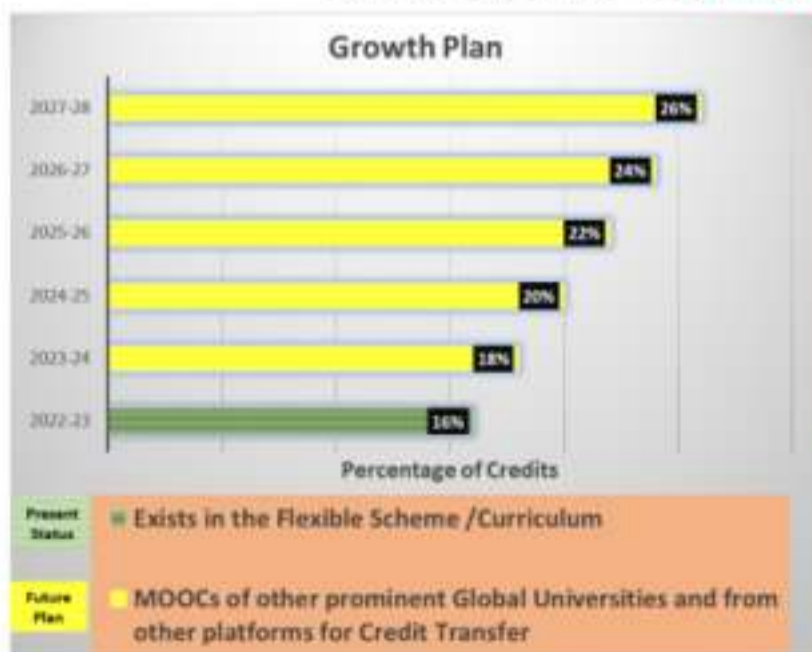


**Cross Disciplinary Thinking: Open Courses**

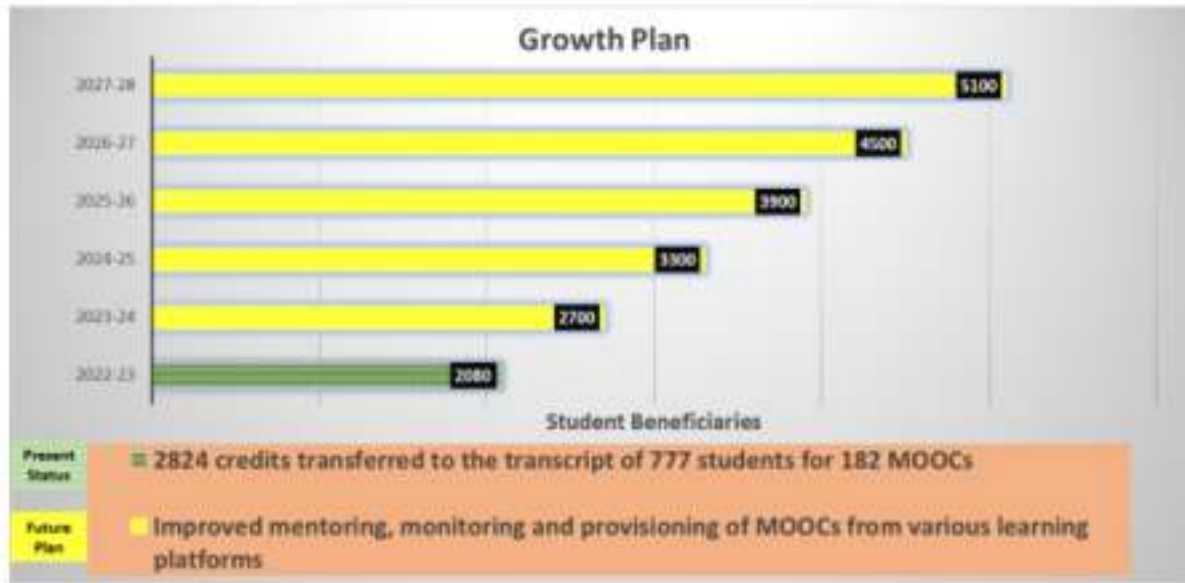


- Provisioning of MOOC based courses from various learning platforms / other institutions
- Credit transfer facilitation through MOOC based learning platforms / other institutions
- Development of Institutional MOOCs for credit transfer

**Online Education: SWAYAM/NPTEL/MOOCs**



## Online Education: Credit Transfer Through SWAYAM/NPTEL/ MOOCs



## Online Education: MITS MOOCs



## Accessibility and Flexibility for Teaching Learning

Provisioning of Blended Teaching Learning under various modes of Teaching Learning, as per the nature of the course

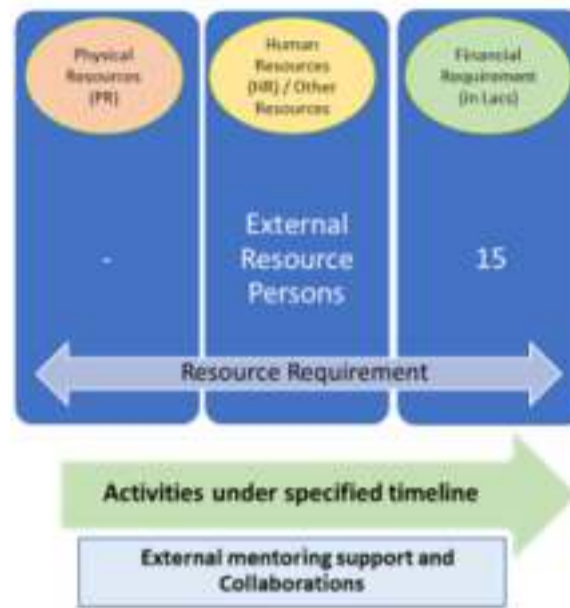
## Accessibility and Flexibility: Blended Teaching Learning



**Holistic and Multidisciplinary Education, Knowledge of Many Arts” or “Liberal Arts”, Integration of all branches of Creative Human Endeavour**

- Provision of “Novel Engaging Courses” through mentoring system
- External mentoring from various other institutions

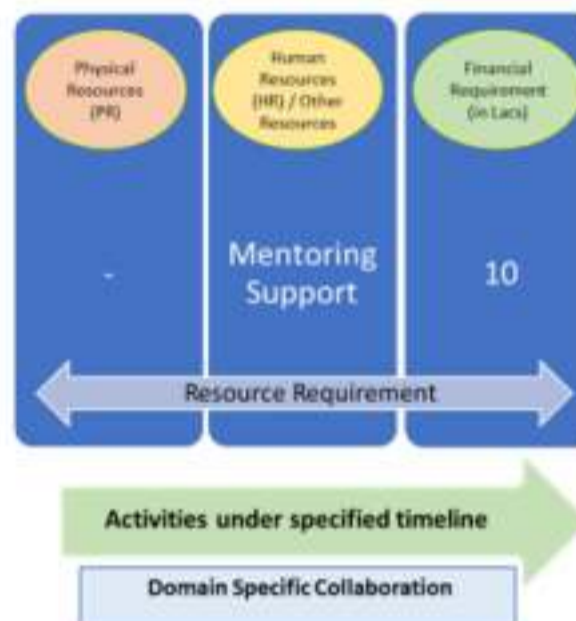
**Holistic Education and Informal Knowledge: Novel Engaging Courses**



**Skill Development and Creativity**

**Provision of Skill based Projects for effective learning**

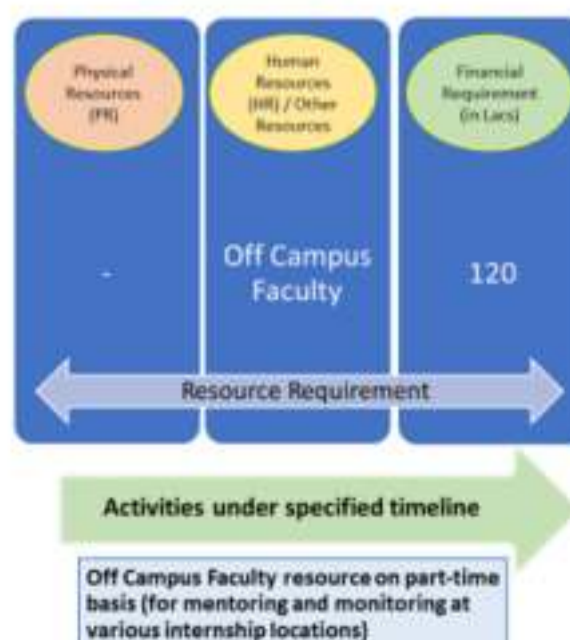
**Skill Development and Creativity: Skill based Projects**



**Industrial/External Working Exposure through Internship**

- Provision of full semester Internship with industry/ organizations
- Scope enhancement (inclusion of SMEs, businesses artists, craft persons etc. for the enrichment of external working environment)

**Industrial/External Working Exposure: Internship**



**All Round involvement**

- Inclusion of Extra Curricular Activities and attainments in the Curricula through credits (Professional Development)

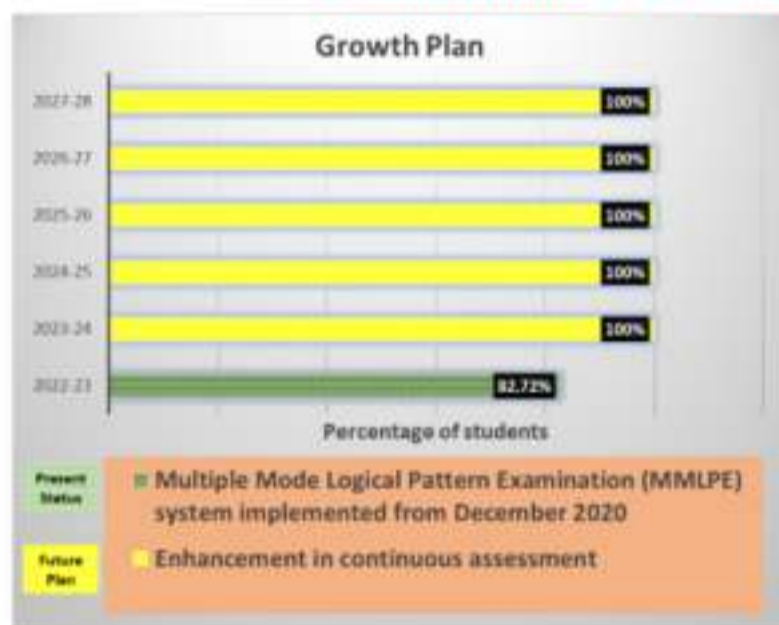
**All Round Involvement: Extra Curricular Activities in the Curricula**



**Move Away from high-stake examinations (unburden the students)**

- More continuous and comprehensive evaluation
- Implementation of Multiple Mode Logical Pattern Examination (MMLPE) System
- Emphasis on internal assessment and evaluation through well structured mechanism

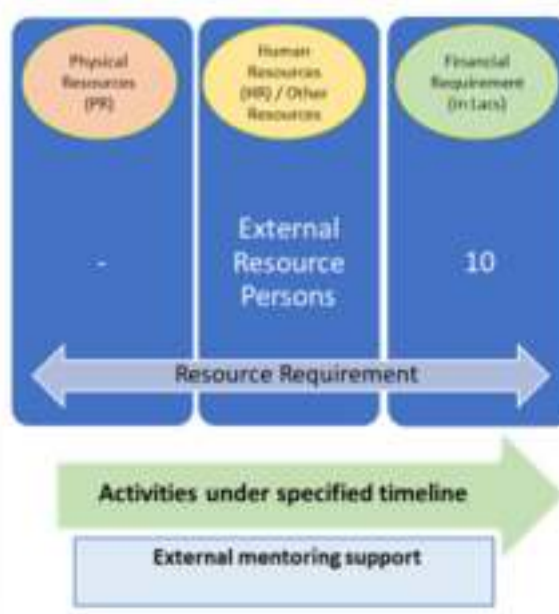
**Moving Away from High-stake Examinations (unburden the students): Continuous and Comprehensive Evaluation**



**Integration of "Humanities and Arts" with STEM: Science, Technology, Engineering and Mathematics as STEAM**

- Provision of Mandatory Value based Courses for positive learning Outcomes
- Enhancement of scope by provisioning more value based courses, as per NEP 2020

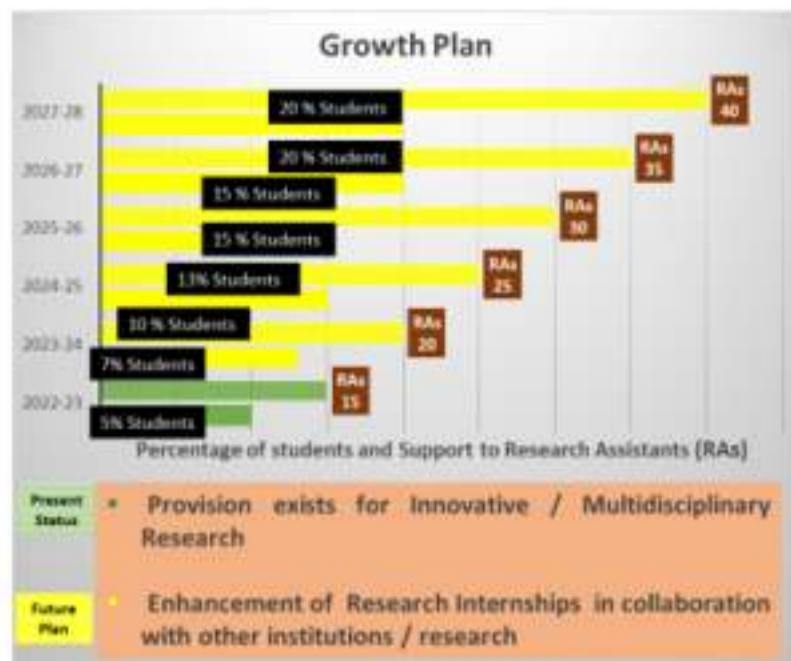
**Humanities and Arts Integration with STEM: Mandatory Value based Courses**



**Innovative / Multidisciplinary Research**

- Promote research activities by extending support to Research Assistants (RAs)/ students/ faculty members
- Provision for Research Internship for active engagement of students with the practical side of their learning

**Innovative/Multidisciplinary Research: Research Internship**



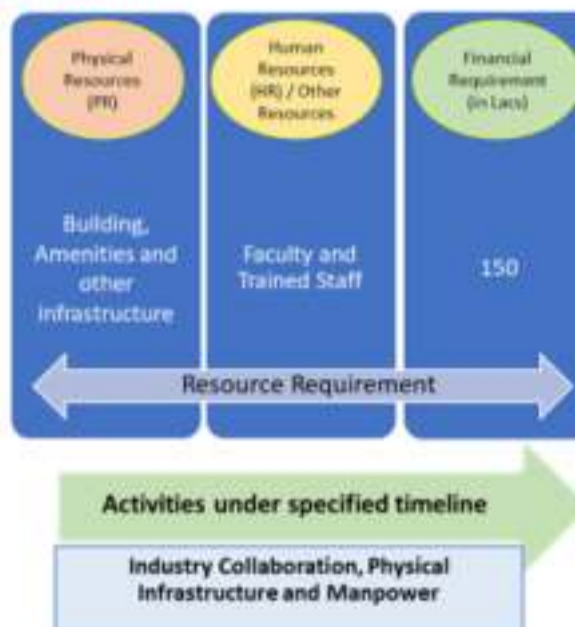
**Industry Readiness**

- Provision of Industry Collaborative Courses
- Provision of Industry Partnership Programmes
- Provision of Vocational Courses

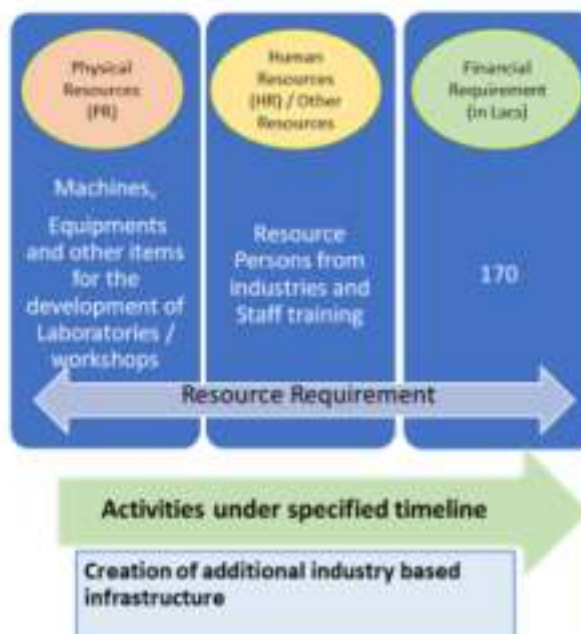
**Industry Readiness: Industry Collaborative Courses**



**Industry Partnership Programmes: Industry Collaborated Degree Programmes**



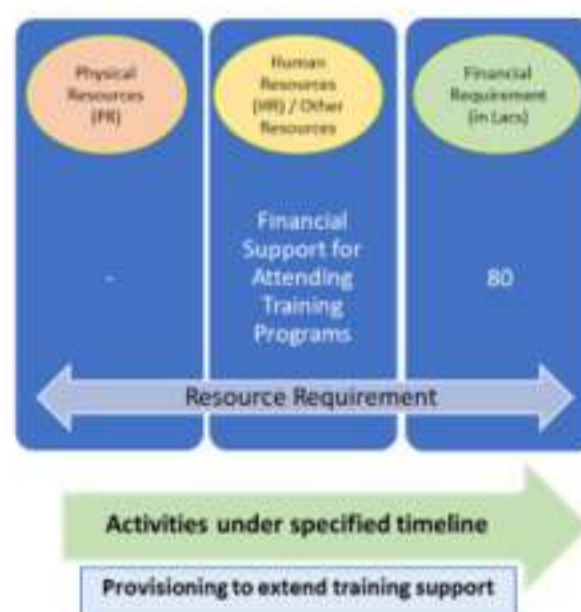
## Industry Readiness: Vocational Courses



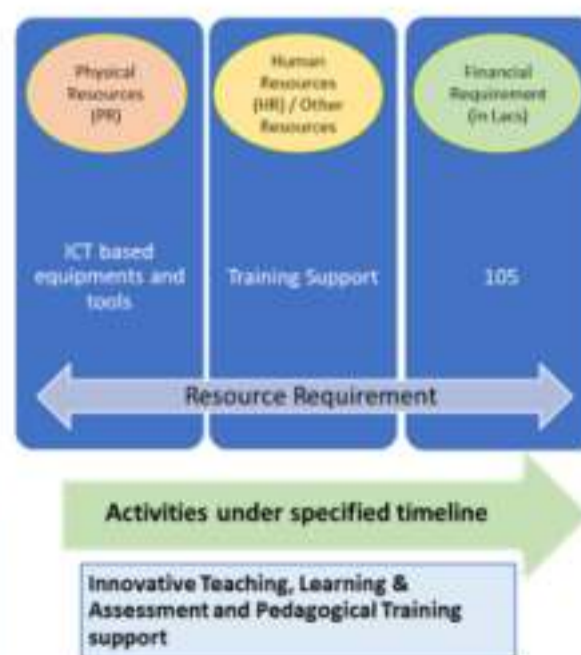
### Facilitation of Training and Innovative Teaching, Learning & Assessment

- Training of faculty members and technical staff for enrichment of their knowledge
- Adoption of Criterion Based Grading
- Diversity of learning methods to be included for more effective modeling of Outcome Based Education (OBE) Model

## Enrichment of Faculty and Staff knowledge: Facilitation of Training



## Innovative Teaching, Learning & Assessment: Criterion Based Grading



**Cross disciplinary and Interdisciplinary thinking, Innovation**

- Focus on Interdisciplinary Projects

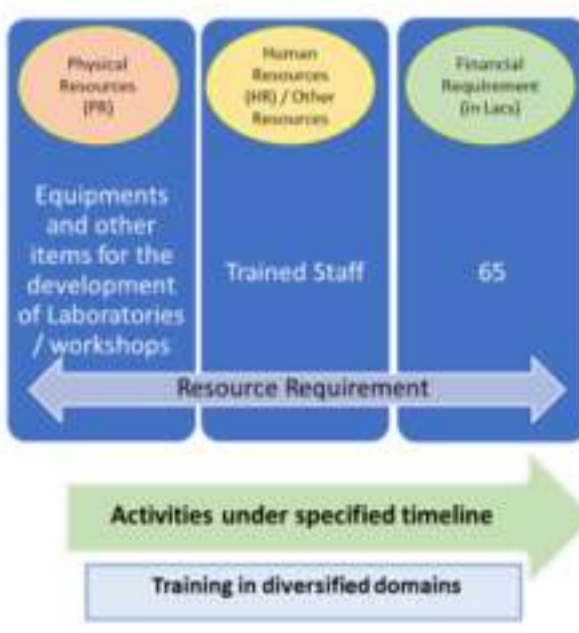
**Cross Disciplinary and Interdisciplinary Thinking, Innovation: Interdisciplinary Projects**



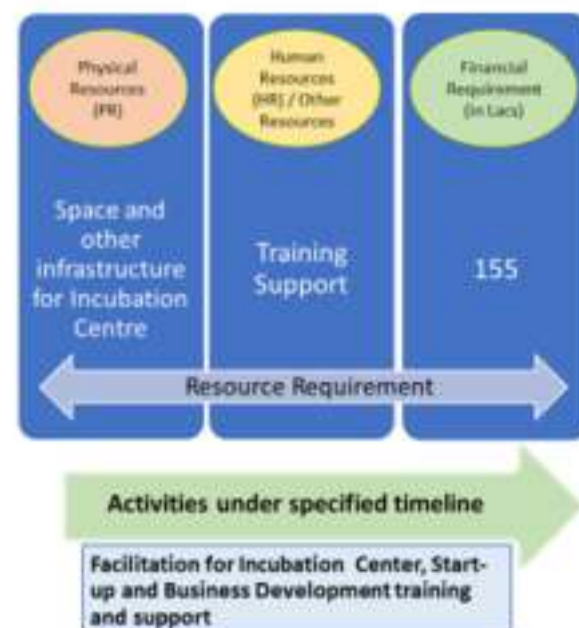
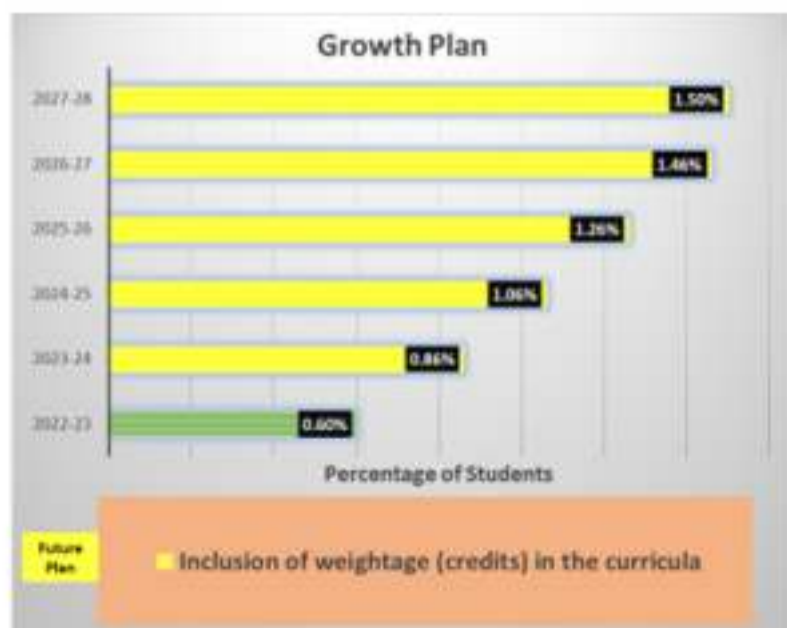
**Promote Entrepreneurship, Start-up activities**

- Provision of Skill based Courses in Local / Regional Language
- Facilitation for Incubation Center, Start-up and Business Development training and support

**Entrepreneurship: Skill based Courses in Local/Regional Language**



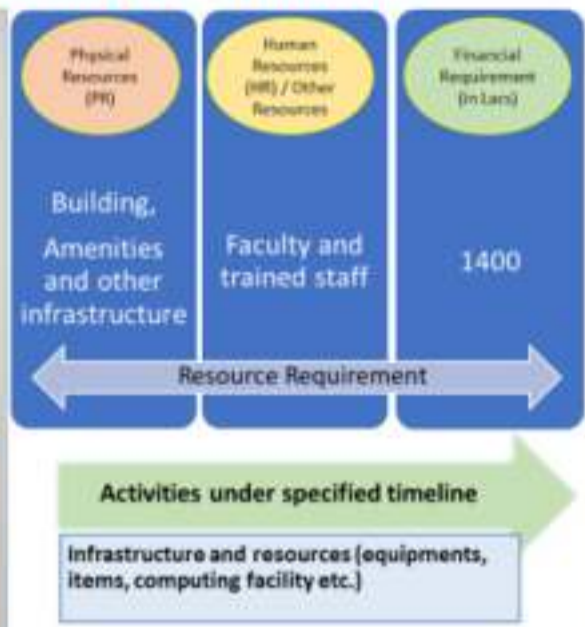
**Entrepreneurship: Start-up Activities**



**Future Skill Areas and Innovative Domains**

- Introduction of new Programmes in emerging areas
- Provision of Certificate Courses
- Provision of courses for Industry Persons (industrial executives / manpower)

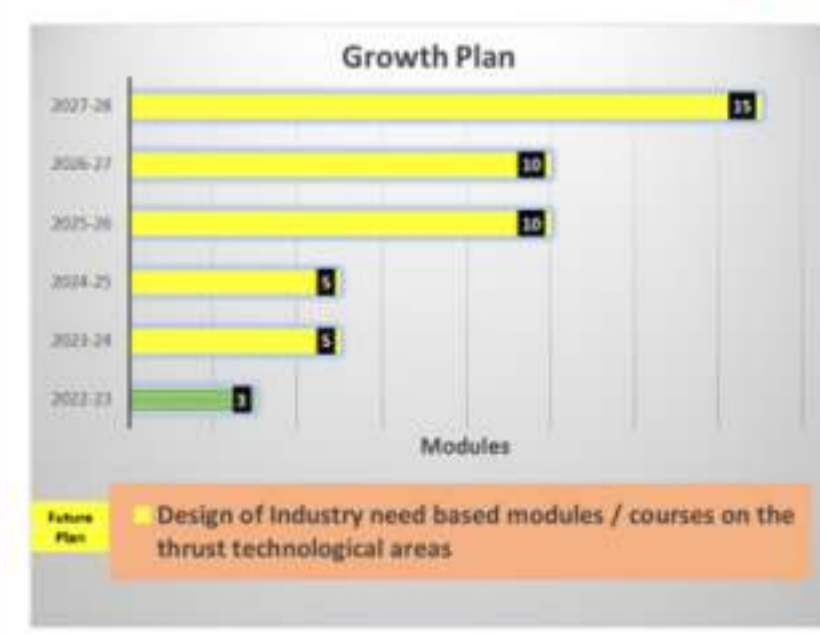
**Future Skill Areas and Innovative Domains: New UG Programmes in Diversified Domains as per Societal and Industrial Need**



**Future Skill Areas and Innovative Domains: Certificate Courses**



**Industry Executive Training: Courses for Industry Persons**

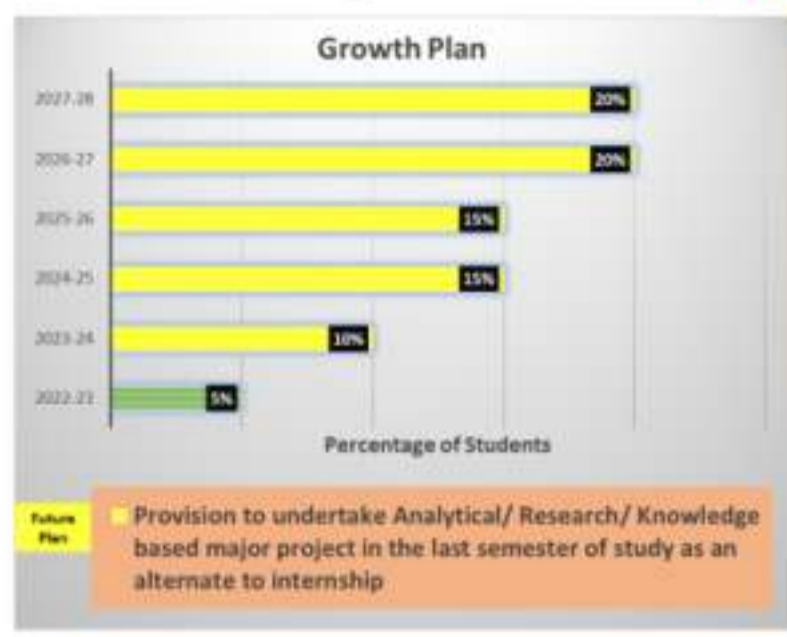




**Degree with Research at UG Level**

- Provisioning of Research oriented major project for the award of UG Degree with Research

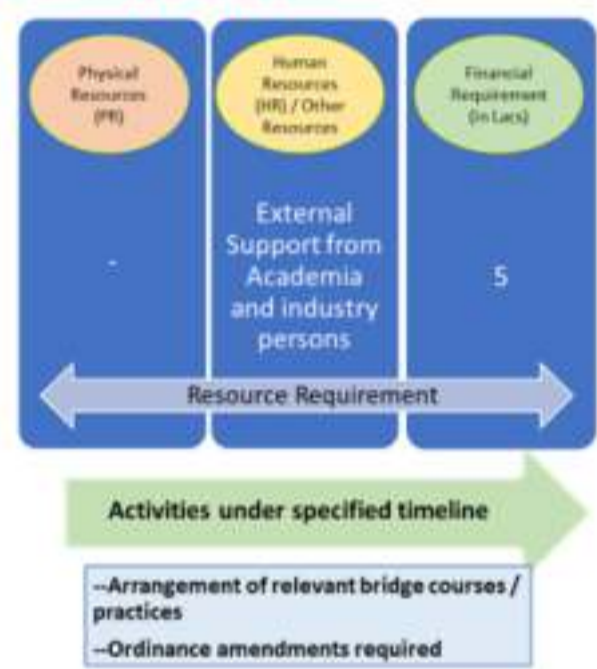
**Degree with Research : Flexibility and Choice**



**Multiple Entry and Exit Options**

- Provisioning to offer certificate, diploma & Bachelor degree for enhanced choice and flexibility

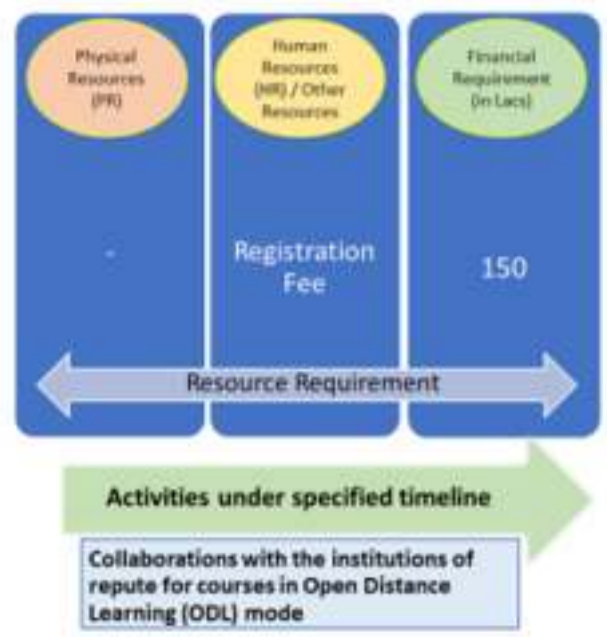
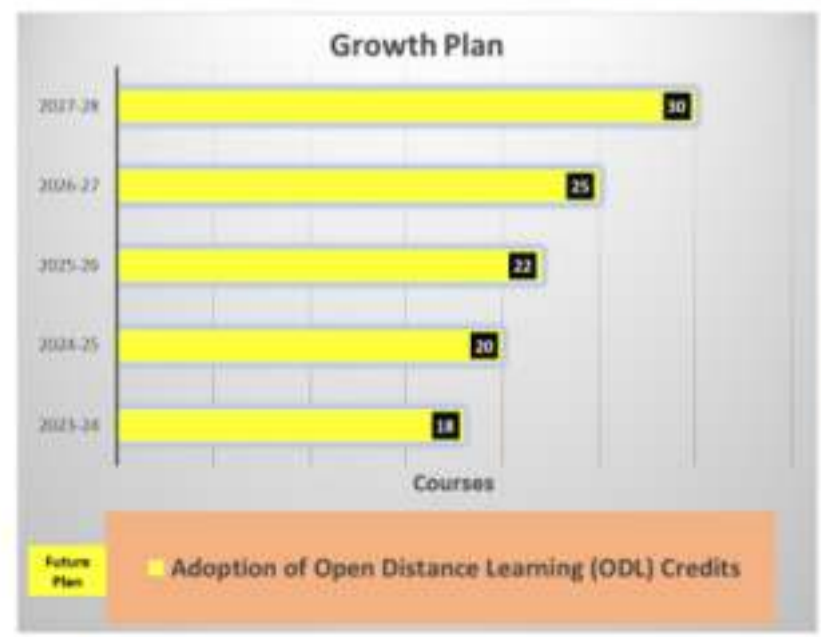
**Multiple Entry and Exit Options: Flexibility and Choice**



**Promote Education through Open Distance Learning (ODL)**

- Provision for the courses and Grades (with credit transfer) through Distance Learning

**Open Distance Learning (ODL): Courses and Grades Acquired Through Distance Learning**



**Academic Bank of Credit (ABC): Accountability of Credits Earned Through Various Platforms**



**Research Plan**

- Institute has a well-defined Research Promotion Policy which is disseminated through its website. The Institute has an established Research Committee to promote and encourage research among students and Faculty. Support is provided to faculty members in applying for research projects offered by different funding agencies.
- There are about 100 scholars working in different domains of engineering and science. Institute has created an ecosystem for innovation, creation, and transfer of knowledge by establishing R&D cell, MOUs with industries.
- Research scholars undergo a rigorous coursework and their progress is monitored regularly through the Research Advisory Committees. Scholars are required to publish minimum two papers in the area of their research before submission of the thesis.
- Technical events such as quizzes, projects exhibitions, paper presentations, posters, etc. are organized to showcase talents of students. The Institute organizes FDPs, STTPs, Technical Workshops, Seminars, and National and International Conferences on a regular basis.
- The faculty qualifications are good and many of them have good exposure and research collaboration with institutes of repute and due to being on the expert panels of Central Agencies like the NBA, UPSC etc.
- During the last five-years, faculty members at Institute have published more than 400 research articles in different journals and conference publications. In order to create a research culture among students and faculty, the institution has collaborations with about 400 plus industries/organizations.
- Research grants of more than 3 Crore were received from various agencies for research projects. About 80 workshop/awareness programmes were conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill development.
- More than 100 books and chapters in edited volumes/books were published and around same number of papers were presented in national/international conference-proceedings.
- Revenue of around Rs. 1.0 Crore was generated from consultancy during the last five years. More than 100 extension and outreach activities were carried out by the Institute through NSS/NCC.
- More than 500 collaborative activities are carried out for research, faculty/student exchange and industry Internships. 25 plus active collaborations and MoUs have been in action with industries, government and research organizations in India.

**Fifteen Year Research Plan**

**Research, Development, Innovations & Professional practices**

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Providing research grant/ Seed money to faculty for innovative research			Implemented	Enhancement
2	Recognition & support to faculty for national/international fellowship for advanced studies/research			Yes	Enhancement

3	Recognition & support to faculty for receiving Research & development funds from various agencies, industries and other organizations (minor, Major, interdisciplinary, industry supported projects)	Yes	Enhancement
4	Support for Innovative Students projects	Partially	Fully Deserving
5	Support for International projects taken by faculty & students.	NA	Implementation
6	Conduction of Workshop and seminar on IPR & Industry-Academia Innovative Practices	03/Year	05/ Year
7	Recognition & awards for innovation by faculty/research scholars/students	Yes	To be continued
8	Development of Incubation Centre	In-Process	Fully supported including Financial Support
9	Promotion for Start-up incubated on campus to commercialise research innovations annually	In-Process	Fully supported including Financial Support
10	Increase in number of Ph.D. awarded & Admission	Awarded-53 Admitted: 65	Awarded: 103 Admitted: 100+
11	Increase in Research Publication in SCI/SCOPUS indexed journals (in last 5 years)	308/401	500/700
12	Increase in Books and Chapters in edited volumes	Books/ Chapters: 80	Books/ Chapters: 200
13	Increase in Publication of research papers in national and international Journals & conference proceedings/Year	01 /Per Faculty	02 Per Faculty
14	Increase in Quality of publication-Citation Index of Faculty Members ( Last five year Web of Science & Scopus Index)	Web of Science: 1565 Scopus: 2093	10% increase per year
15	Increase in Patents applied/awarded/published	Granted:08 Published: 11 Applied: 15	Granted:35 Published: 50 Applied: 20
16	Support for Faculty Participating in Seminar / Conferences	100% Support	100%
17	Increase in Revenue generation through Consultancy & Industrial training	5%	8%
18	Linkage with Institutes/industries for internship, on-the job training, project work, sharing of research facilities along with Faculty & Students exchange program	Initiatives taken	Effective implementation
19	Signing MoUs with institutions of national, international importance, other institutions, industries, corporate houses.	51 MOUs	100+ MOUs
20	Motivating research and development leading to technologies with immediate societal value (water, energy, housing, healthcare, education, etc.)	Initiatives taken by framing research groups of faculty	Effective implementation
21	Establishing research centres of excellence	NA	01 /Year
22	Establish mechanism to support high impact research through an annual call for proposals and a process for identification of thrust areas.	Implemented w.e.f 2017-18	All Deserving
23	Encourage formation of multi-disciplinary research centres in high potential areas.	Developed	Effectiveness Enhancement with induction of students with faculty of other institute
24	Proactive and flexible mechanisms to attract high quality faculty and researchers	Under Process	Effectiveness Enhancement
25	Create research groups to attract students for PhD programme.	Implemented w.e.f 2018-19	Increase in numbers
26	Encourage and support advanced research conferences at the Institute.	02/Year	04/Year
27	Enable PhD student exchanges with partner international universities.	Under process	Effective Implementation

28	Enhance facilities and working environment for PhDs and post-doctoral researchers.	Adequate Level	As per Global Standard
29	Enhancing Placement activities and dedicated PlaceComm Cell to promote and enhance PG & PhD placements.	Adequate Level	Effectiveness Enhancement
30	Increased publications per faculty, citations per faculty, citations per paper	Adequate	As per NIRF
31	Increase in annual research funding.	3.28%	7%
32	Initiate Joint Academic Courses in Medicine/Healthcare/Agriculture/physical education in collaboration with other institutions.	Under Progress	Implemented

### Five Year Research Plan

S. No.	Parameter	2023-24	2024-25	2025-26	2026-27	2027-28
1.	Seed money to Faculty for research	Up to 01 Lacs/ Faculty	Up to 02Lacs/ Faculty	Up to 03 Lacs/ Faculty	Up to 04 Lacs/ Faculty	Up to 05 Lacs/ Faculty
2.	Percentage of Faculty receiving national/ international fellowship/financial support by various agencies for advanced studies/ research	05%	05%	06%	07%	07%
3.	Research funding from Government and non-government sources	20 Lacs	20 Lacs	40 Lacs	40 Lacs	50 Lacs
4.	Percentage of Faculty having research projects	30%	30%	30%	35%	35%
5.	Percentage of Faculty recognised as research guides	30%	30%	30%	35%	35%
6.	Number of candidates registered for Ph.D per Faculty	06	06	06	06	06
7.	Number of research papers published per Faculty in the Journals as notified on UGC CARE list	01	02	02	02	02
8.	Number of books and chapters in edited volumes published per Faculty	01	01	01	02	02
9.	Bibliometrics of the publications during the last five years based on Scopus/ Web of Science – h-index of the Institution	20	20	20	20	20
10.	Number of functional MoUs/linkages/collaboration with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research	06	06	08	08	08
11.	Revenue generated from consultancy and corporate training	50 Lacs	50 Lacs	100 Lacs	100 Lacs	100 Lacs
12.	Number of Exchange Programme for Student and Faculty for Research	03	03	05	05	07

### Identified Research Domains

Adhoc Network	Marketing Management
AI applications to Electrical Power Systems	Mathematical Modelling in ecology
Bio- Medical Instrumentation	Mechanical Behaviour of Materials
Bio Signal Processing	Mechanical system Design
Biomaterials	Medical Image Processing
Biomechanics	Microfluidics
Biometrics	Microwave Engineering
Catalysis	Modeling & Simulation
Cement	Molecular Biology
Communication Engineering	Multilevel Inverters
Composite Materials	Nanoelectronics
Computational Fluid Dynamics	Network Security
Computer Networks	Number Theory
Computer vision and machine learning	Numerical Method
Condition Monitoring	Optical Communication & Networking
Construction Technology & Management	Optimization Techniques
Control systems	Performance and Economic Analysis
Cryptography	Power Quality
Data Mining	Power System
Data Science	Power System Operation & Control
Data Science using Python	Product Design
Data Structures, DBMS	Production & Operation Management
Deep learning	Production & Manufacturing
Differential equation Computation	Psychoanalytical Approaches to English Fiction
Digital Communication	Quality Assurance
Digital modulation	Renewable energy
Digital Signal Processing	Repair and seismic retrofitting and strengthening of structures
EEG Signal Processing	Security
Electric Vehicles	Sentiment Analysis
Antenna Designing	Separation Processes
Energy	signal Processing
Energy Auditing and management	Smart City
Engineering Materials	Soft Computing Application
Environmental Engineering	Solar Energy
Finite Element analysis	Solar Rooftop PV systems
Fluid Dynamics	Solid Waste Management
Fuzzy logic	Special Functions
Geotechnical engineering	Speech Recognition
Grid Connected Systems	Spray Forming
Hesitation Mining	Stress and Vibration analysis
High Performance Computing	Structural Engineering
HRM OB Operations	Structural Response Control
Hybrid evolutionary computing	supplementary cementitious materials
Hybrid renewable energy systems	System Reliability
Image and Signal Facing	Technical Education
Image Processing	Thermal Engineering
Impact and blast resistant structures	Toxicology and Environmental Engineering
Information Security	Tribology and Maintenance
Integration of Renewable Energy	Ultra-high performance concrete
Intelligent Computational Techniques	Urban Planning
Internet of things (IoT)	VLSI Design
Maintenance Management	Water Resource Engineering
	Welding Technology
	Wireless Networks

## Infrastructure Development Plan

- The Institute is spread over an Area of 44.6 acre which is lush green and has an aesthetic landscape.
- The Institute constantly endeavors to provide quality education and ensure all round development of students.
- The Institute has well maintained adequate number of class rooms, laboratories, computing equipments well beyond the regulatory guidelines conducive for teaching learning activities.
- The Institute has total 59 number of class rooms including seminar halls, conference halls and studios which are well equipped with ICT Audio Video facilities like Smart LCD Projectors, Wi-Fi LAN enabled etc. which help teachers and students to share their ideas among themselves.
- The Institute has total of 68 number well equipped laboratories including computing labs in all the departments to provide hands-on experience to the students, some of the laboratories are equipped with ICT facilities. Virtual labs are also developed for lab classes.
- A total of 615 computers are available exclusively for student usage. Apart from these, computers and laptops have been provided to the departments for faculty usage.
- The computing facilities include licensed software's and also open software's are being used as per the curricula requirements. Some of the licensed software's are ANSYS, MATLAB, PS CAD, Proteus Design Suite, Office Pro Plus 2016, SQL Server ST2016, Turnitin (for plagiarism checking) etc.
- The Institute has internet connectivity via lease line of 100 MBPS from NKN and 100 MBPS from IshaNetsol.
- The entire campus is Wi-Fi enabled with 24/7 internet facilities to the students and staff. The Institute has following servers available: HP Xeon 8 Core (2.10 GHz), Intel Xeon E5-2603v3 (1.6 GHz) State –of –art MOOC development centre has been established in the Institute where in faculty members develop their MOOCs.
- The Institute has its own MOODLE server since 2017 to facilitate E-learning, evaluation including conduction of Mid Semester & End Semester Exams (MCQ based type). NPTEL local chapter has been established since 2017 to provide e-learning through MOOC courses.
- There is a shop for Xerox and stationery within the campus to cater to the needs of students.
- There are 01 Boys Hostel & 03 Girls Hostel functional in the Institute at the moment which are equipped with facilities including mess etc.
- As per the Vision of Institute, the Institute has created administrative block, Academic Infrastructure & amenities. Presently, Construction of one additional Academic Block is also under progress to accommodate the need of increased intake of students in future.
- In the last three years, augmentation in physical infrastructure, equipment, library & Digital Teaching-Learning facility is done to ensure the need arisen due to increase in intake, market demand for emerging areas of Technology & Covid-19 pandemic challenges.

**Methodology to ensure adequacy of Teaching-Learning Infrastructure & Facilities:** Every year, before commencement of next financial year, a need based analysis is done by every department & section to identify the additional requirement for teaching-learning infrastructure considering following:

- AICTE Norms
- Recommendation of BoS
- Removal of obsolesce as per current Technological Demands
- Students strength/Intake
- Feedback received from Stakeholders
- Perspective Plan of Institute
- Budget constraints (if any)
- Guidelines of Quality Assurance Bodies like NBA, NAAC etc.

The proposals received from various Departments/Sections are compiled at Institute level for the review and approval of Infrastructure committee of BoG. The recommendations of Infrastructure committee are further reviewed and approved in the Finance/BoG meeting for budgetary provision in next financial year.

Teaching-Learning Facilities in the Institute:

The Institute has twelve Departments namely Civil Engineering, Electrical Engineering, Mechanical Engineering, Electronics Engineering, Computer Science & Engineering, Information Technology, Chemical Engineering, Architecture & Planning, Management, Mathematics & Computing, Applied Science & Humanities. In all the departments & central level following facilities are provided as per AICTE standards and curriculum needs:

**Classrooms:** As per AICTE guidelines on area requirement, Institute has developed adequate number of well-furnished, well ventilated, classrooms equipped with ICT facility.

**Laboratories:** All the laboratories are established as per AICTE norms & equipped with equipments, machines, software and computing facilities according to BoS recommendations on curriculum for the conduction of experiments/practical's to ensure achievement of lab course outcomes. Laboratories are also utilized for mini & major projects, skill based component as a part of teaching & contents beyond the syllabus. The virtual labs are also developed for online lab classes.

**Seminar Hall/ Tutorial rooms:** The Institute has multiple seminar Halls & Tutorial for presentations, various expert talks, group discussions, tutorial & remedial classes.

**Central Library:** Central Library of the Institute can be considered as a very special place in the MITS Campus with its rich collection of books and journals in the field of Engineering and Architecture related disciplines. Central Library currently houses around 109443 books in different heads i.e Library grant, Student chapter grant & Book bank grants, collection includes textbooks and Reference books for Engineering Graduates, Post Graduates and Ph.D. curriculum in Civil Engineering , Mechanical Engineering, Electronics, Electrical, Computer Science & Information Technology , Management, and Architecture Disciplines. Library collection also includes documents in Computer Science, History of Science, Fictions, Stories, General books, Encyclopaedias and Dictionaries, Magazines etc.

**Internet**

- National Knowledge Network (NKN) through RailTel: Available bandwidth: 100 MBPS Dedicated Leased Line
- Ishan Netsol: Available bandwidth: 100 MBPS Dedicated Leased Line
- Wi Fi availability: Yes, Both in Academics Area and Hostels. The entire campus is WiFi enabled with 24/7 internet facilities to the students and staff.
- Internet access in labs, classrooms, library and offices of all Departments: Yes (everywhere with Fibre Backbone) Wired and well as Wireless with Firewall and protected and being monitored through Proxy.
- Security arrangements: Linux proxy server is being used for recording user activity on the server. The internet access (wireless and wired both) is password protected. Iptables are being used as firewall and to define access rules. Un-required Sites are blocked by using pattern matching rules.
- The Institute has following servers available: HP Xeon 8 Core (2.10 GHz), Intel Xeon E5-2603v3 (1.6 GHz)
- Some of the licensed software’s are ANSYS, MATLAB, PS CAD, Proteus Design Suite, Office Pro Plus 2016, SQL Server ST2016, Turnitin (for Plag checking) etc.



**Fifteen Years Infrastructure Development Plan**

Years	2023-2028	2028-2033	2033-2038	Status	Intervention
Improvement /up-gradation & increase in existing facilities					
1.	Modernization and expansion of Class rooms, Laboratories, Seminar halls, smart classrooms, & equipment.			70%	100%
2.	Automation of Library (integrated Library Management System)			70%	100%
3.	Automation/digitization of examination, evaluation system			60%	100%
4.	Up-gradation of LMA (Learning Management System)/MOODLE			Under progress	Continuous up-gradation



5.	Up-gradation in IT Infrastructure (Computer, Internet, Browsing Centre, Computer centres, Departments CC, Available band width	Under Progress	Continuous up-gradation
6.	Up-gradation of all buildings and their surroundings to global standards in cleanliness and safety	Adequate	As per Global Standard
7.	Creating comfortable accommodation to all students and scholars in hostel	Accommodating 600 Students	2000
8.	Provide well-maintained and accessible sports facilities for all major sports	Partial	Full facilities
9.	Development of Additional Academic Block	--	Academic block for new UG & PG programmes/ increase in intake
10.	Development of Auditorium for Academic Activities	--	Auditorium with capacity of 1000 Students
11.	Provide sufficient well-maintained quarters for the faculty and staff	Limited	Adequate
12.	Development of "Continuing Education Program Centre/ Centre for Advanced Learning and Training" for organizing various faculty & Staff Development activities	--	Dedicated faculty & Staff Development Centre
13.	Project laboratory/Incubation Facilities for students and faculty	Limited	Adequate
14.	Renovation of Institute Guest House	Limited	Adequate
15.	Renovation of Laboratories and Development of New Laboratories	Adequate	As per future needs
16.	Development of Business School	-	For new proposed programme
17.	Development of Pharmacy School/Department	-	For new proposed programme

**Infrastructure Development Plan for next Five Years**

Auditorium	Capacity of 2000 Students
Smart Class Rooms	02/year
Business School	For new proposed programme
Centre for Advanced Learning and Training	For Capacity Development
Pharmacy School	For new proposed programme
Labs (New + Renovation)	As per curriculum requirement
Digital Infrastructure	As per ICT plan of Institute

Capability and Capacity Enhancement through Digital Infrastructure

<b>Digital Infrastructure: Enhancement of Capability and Capacity</b>	<ul style="list-style-type: none"> <li>• MOOC Development Centre, Smart Class Rooms</li> <li>• Arrangement of advanced technology tools with latest state of the art digital infrastructure</li> </ul>
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**Capability and Capacity Enhancement: Digital Infrastructure**

Year	Progress (%)
2027-28	100%
2026-27	100%
2025-26	100%
2024-25	80%
2023-24	70%
2022-23	60%

Physical Resources (PR)	Human Resources (HR) / Other Resources	Financial Requirement (in Lacs)
High-end servers, Networking, digital boards, storage etc.	Dedicated Trained Staff	315
Resource Requirement		
Activities under specified timeline		
Digital Infrastructure		

Governance & Administrative Plan

- The Board of Governors of the Institute plays an important role in the growth of the Institute through regular reviews of policy matters and initiating new practices by creating 5-year vision plans. Year-wise targets have been set through the 'NEP-2020 Action Plan' prepared by the institute and approved by the BoG in its meeting in July 2020.
- The Institute is administered on a day to day basis by the Director with other faculty members holding key administrative and academic responsibilities.
- The organizational chart and the roles and responsibilities of each functionary are clearly defined and also available on Institute website.
- The vision, mission, branding Statement and value framework is aligned with the perspective plan of the Institute, which is prepared with the contribution from BoG members and faculty members considering the SWOT analysis, vision plan of each department and feedback from stakeholders.
- Powers are given to Class Coordinators to ensure decentralization of all processes, monitoring records of attendance, student leaves, forwarding various documents & applications of students and final forwarding of examination form.
- For each initiative taken by the IQAC separate coordinators are appointed at the department level to help in administration of the different activities such as, OBE coordinator for monitoring activities related to attainment of learning levels, coordinator for remedial/bridge classes, web coordinator for departmental webpage management, Coordinator for departmental e-Newsletter, alumni coordinator for enhancing and managing alumni interaction and plagiarism administrator have clearly defined responsibilities.
- Due to the constant efforts of MOODLE coordinators, use of MOODLE for teaching-learning-evaluation has been institutionalized now.

#### Other Committees

- ? Internal Quality Assurance Committee
- ? Academic Council
- ? Development Cells
  - o Academic Development Cell
  - o Student Development Cell
- ? Board of Studies
- ? Research Committee
- ? Proctorial Board
- ? Internal Audit Committee
- ? Industry-Institute-Interaction Cell
- ? Library Advisory Committee
- ? Women Guidance, Grievances and Redressal Committee
- ? Girls Counselling Cell
- ? Students Grievances Cell
- ? Discipline Committee
- ? Central Purchase Committee
- ? Anti Ragging Committee as per guidelines of Honorable Supreme Court of India
- ? Internal Complaint Committee (ICC) for Women (Students & Staff) for Sexual Harassment at workplace
- ? Hostel Admission Committee

#### Internal Quality Assurance Cell:

To monitor standards of the higher educational institutions the University Grants Commission (UGC) has established the National Assessment and Accreditation Council (NAAC) as an autonomous body, under section 12(ccc) of its Act in September 1994. According to the 12th Plan guidelines of the UGC for Establishment the Internal Quality Assurance Cell (IQAC), is being constituted in the institute for building a mechanism to ensure a quality culture at the institutional level to develop proper structure and processes to meet the diverse needs of the stakeholders, for continuous improvement.

#### Academic Council:

Academic Council of the Institute is constituted according the UGC Guidelines January, 2018 consisting of following members:

1. The Principal (Chairman)
2. All the Heads of Department in the College.
3. Four teacher of the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college.
4. Not less than four experts/academicians from outside the college representing such areas as Industry, commerce, Law, Education, Medicine, Engineering, Science etc, to be nominated by the Governing Body.
5. Three nominees of the university not less than Professors.
6. A faculty member nominated by the principal (Member Secretary)

The meeting of Academic Council of the Institute is conducted at least twice in a year.

**Development Cells:**

Following Development cells are taking efforts for the development of various Academic & Administrative activities of the Institute through continuous meetings & efforts as per development plan of the Institute for ensuring Quality Enhancement, compliance of existing practices and developing new strategies:

- Academic Development Cell
- Student Development Cell

**Decentralization in working and grievance redressal mechanism**

- Dean (Academics)
- Dean (Students Welfare)
- Proctor
- Registrar
- Deputy Registrar
- Controller (Examination)
- Dy. Controller (Examination)
- Assistant Controller (Examination)
- Head of the Department
- Class Coordinator
- Mentor
- Chief Warden
- Sr. Wardens
- Wardens
- Section In-charge
- Chairperson Central Purchase Committee
- Finance Officer
- Other Coordinators/In-charges

**Fifteen Years Governance & Administration Plan**

The Governance & Administration Plan for the next fifteen years is prepared for quality assurance and efficient management to ensure the objectives of proposed deemed to be university for following categories:

- (a) Governance & Quality Assurance
- (b) Technical & Internal Support System
- (c) Students Support & Progression
- (d) Engagement with Alumni, Industry & Society
- (e) Internationalization

**(a) Governance & Quality Assurance**

Years	2023-2028	2028-2033	2033-2038	Status	Interventions
1.	Conducting regular Governing Body Meetings			04 Meetings/ Year	To be continued
2.	Organizing regular meetings of Finance Committee			04 Meetings/ Year	To be continued
3.	Organizing regular meetings of Academic Council & Board of Studies			04 Meetings/ Year/ Committee	To be continued
4.	Assurance for Vision and Mission of the Institute			Review & Assurance	To be continued
5.	Effective Implementation and Monitoring of the Institutional Perspective & Development Plan			Six Monthly Review	To be continued
6.	Decentralization and participative management in working and grievance redressal mechanism			Decentralized management	Increase in IT support Mechanism

7.	Effective Management Information System	IT based Management Information System for selected modules	IT based Management Information System for all required modules
8.	Providing Administrative & Financial Support for Quality Improvement strategies for: <ul style="list-style-type: none"> <li><input type="checkbox"/> Curriculum Development</li> <li><input type="checkbox"/> Teaching &amp; learning</li> <li><input type="checkbox"/> Examination &amp; Evaluation</li> <li><input type="checkbox"/> Research &amp; Development</li> <li><input type="checkbox"/> Library, ICT and physical Infrastructure/Instrumentation</li> <li><input type="checkbox"/> Human Resource Management</li> <li><input type="checkbox"/> Industry Collaboration/Interaction</li> <li><input type="checkbox"/> Admission of students</li> </ul>	Providing as per proposal submitted by various departments & sections after evaluation of availability of funds	100% support
9.	Providing Administrative & Financial Support for Implementation of e-governance in areas of following operations: <ul style="list-style-type: none"> <li><input type="checkbox"/> Planning &amp; Development</li> <li><input type="checkbox"/> Administration</li> <li><input type="checkbox"/> Finance &amp; Accounts</li> <li><input type="checkbox"/> Students admissions and support</li> <li><input type="checkbox"/> Examination</li> </ul>	Partial support	100% support
10.	Providing Financial support for the participation of faculty, staff in Conference/workshop & membership of professional bodies	Providing for participation  In conference/workshop	Provision for membership of professional bodies
11.	Providing Administrative & Financial Support for Conduction of professional development/Administrative training programmes for teaching & non-teaching staff	Providing for state level training programmes	Provision for national level programmes
12.	Providing Financial support for Participation of faculty in professional development programmes, orientation programme, refresher course, short term course, FDP	Providing for participation in India	Provision for International participation
13.	Faculty & Staff recruitment and hiring of various services required in administrative system	Inadequate	100% Adequacy to be achieved
14.	Implementing Welfare scheme for faculty, teaching & non-teaching staff, and students	Partial support	100%
15.	Use of Internal & External Financial audit	100%	100%
16.	Review & publication of service rules, policies and procedures, functions of various bodies, recruitment and promotional policies.	Regularly	Regularly
17.	Delegation of powers to Administrative Committees and Administrative Heads for taking administrative decisions	100%	100%
18.	Delegation of Financial powers to the Heads of Departments and relevant in-charges	Partial	Up to Rs. 50,000/-
19.	Show Transparency and availability of correct/unambiguous information in public domain	100%	To be Continued with online portal mechanism
20.	Dissemination of the information about student, faculty and staff	100%	To be continued
21.	Effective Budget Allocation, Utilization, and Public Accounting at Institute level	100%	To be continued
22.	Availability of effective Security mechanism	Upto the appropriate level	IT based surveillance system

23.	Initiatives for Environment control and sustainability	Upto the appropriate level	100% Implementation
24.	Development of "Urban Green Zone" at institute of 30% land area	22% Available	Increase up to 30%
25.	<a href="#">Conducting meetings of IQAC (Internal Quality Assurance Cell) in every quarter of Academic Year</a>	01/Quarter (04 / Year)	To be continued
26.	Conducting regular meetings of Development cells of the Institute: <input type="checkbox"/> Academic Development Cell <input type="checkbox"/> Students Development Cell	02/Quarter (08 Meetings /year)	02/Quarter (08 Meetings /year)
27.	Administrative Audit in every Academic Year	01/Year	02/Year
28.	<a href="#">Academic Audit every Academic Year</a>	01/ Year	02/ Year
29.	IT Audit	00/Year	01/Year
30.	Environment Audit	01/Year	02/Year
31.	Laboratory Audit	01/Year	02/Year
32.	Infrastructure Audit	As per requirement	01/Year
33.	Overall development of Institute through <a href="#">360 degree feedback system-Structured feedback system to collect and Analyse feedback collected from:-</a> <input type="checkbox"/> <a href="#">Students</a> <input type="checkbox"/> <a href="#">Faculty</a> <input type="checkbox"/> <a href="#">Employers</a> <input type="checkbox"/> <a href="#">Alumni</a> <input type="checkbox"/> <a href="#">Parents</a>	Feedback from: Students-02/Sem. Faculty-01/Sem. Employers-01/Year Alumni-01/Year Parents-01/Year	Feedback from: Students-02/Sem. Faculty-01/Sem. Employers-01/Year Alumni-01/Year Parents-01/Year
	NBA Accreditation of UG & PG Courses	ME-ISD is Accredited and EE Accreditation expired in Sep, 2018.  *All the UG courses accredited twice in past	NBA Accreditation of all offered eligible Courses will be
35.	ISO Certification of Administrative Offices	NA	Every Year
36.	Participation in NIRF	applied	Every Year
37.	Participation in AISHE	Every Year	To be continued
38.	Participation in Swachh Campus Ranking	Every Year	To be continued
39.	Participation in Atal Ranking of Institutions on Innovation Achievements Framework (ARIIA)	Not applied	Every Year
40.	Participation in CII Survey	Every Year	To be continued
41.	NAAC Accreditation	Accredited with B++ Grade in Cycle-1	Cycle-2: NAAC Accreditation [Target A+]
42.	<a href="#">Submission of AQAR to NAAC</a>	<a href="#">Every Year</a>	To be continued

**(a) Technical & Internal Support System**

Year	2023-2028	2028-2033	2033-2038	Status	Intervention

1	Implementing Simplify systems and processes with the use of digitization & IMS system.	Up to 80%	100% implementation
2	Implementing Use of IT support for purchase, maintenance and administration.	Partial	Complete Support
3	Implement new recruitment/engagement rules to attract qualified staff at various levels.	As per Govt. Norms	In Addition R&D Support for deserving
4	Conducting annual satisfaction survey for services improvement.	Implemented	Increase in Parameters & Effectiveness
5	Organizing Orientation and training for Faculty, Technical & Administrative staff	Organising	Frequency will be increased
6	Development of online complaint systems.	Implemented	Fully Online
7	Organizing Orientation and mentorship programme for new faculty members.	Partially Implemented	Effective Conduction
8	Reducing in average processing times for various administrative issues/services.	Up to the level of 80%	100% Satisfaction
9	Development of online Tracking system for complaint redressal.	Partial	100%
10	Appointment of Technical manpower for program-specific curriculum	Implemented	Numbers will be increased
11	Maintenance and overall ambience in Laboratories.	National Level	International Level
12	Safety measures in laboratories	80%	100% as per standards

### (b) Students Support & Progression

Year	2023-2028	2028-2033	2033-2038	Status	Interventions
1	Providing scholarship and financial support from institute and other sources.			Limited	Numbers will be increased
2	Conducting Capability enhancement & Development scheme- Soft skill development, remedial coaching, language lab, bridge courses, yoga, Meditation, personal counselling and mentoring			100% implemented	100% Effectiveness
3	Guidance for competitive exams			Full Support	Increase in Participations
4	Organizing Induction & Orientation programs for all UG & PG students.			In-Place	Continued
5	Students grievances redressal system			In-Place	Minimum Grievances
6	Prevention of sexual harassment and ragging			Measures are in-place	Reducing complaints to Zero
7	Support for Career Counselling, Placement, Students progression for higher education & entrepreneurship			Up to 80%	100%
8	Increase in Students qualifying in state/national /international level examination (GATE/CAT/ GRE/TOFEL/Civil Services/State Govt. Services.			30% Approx.	60%
9	Organizing Sports and cultural activities/competitions			Yes	Increase in numbers
10	Enhancing Participation of students in cultural activities/competitions at national & international level			Adequate	Increase in Numbers
11	Involvement of Students representations in academic & administrative bodies/committees of the Institute			IQAC, T&P Cell, OBE, Anti-Ragging & Grievances Redressal committee, Woman Grievances, SWAYAM etc.	Participation will be increased
12	Providing support and counselling through Professional counsellor and medical practitioner			Full Support	100% Effective
13	Conducting annual student satisfaction survey			Adequate	Increased Parameters & Effectiveness
14	Providing Adequate facilities for PhD students & Special training for PhD students for Teaching and Entrepreneurship			Adequate	Industry connect

15	Promotion and support for learning by doing	At initial stage	100% Effective
16	Supervised internships for students in industry for longer duration	Implemented	More Industry will be connected
17	Providing Self – Learning facilities, materials for learning beyond syllabus, Webinars, Podcast, MOOCs etc.	Adequate	Increase Effectiveness via Self Developed e-learning materials
18	Conduction of Co-curricular and Extracurricular Activities through sports and cultural facilities, NCC, NSS and <u>other clubs</u> , Annual students activities	Adequate	National & International Level
19	Opening Professional societies / chapters and organizing engineering events	12	22

**(a) Engagement with Alumni, Industry & Society**

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Establishment of an “Alumni Development Cell” at the Institute to support alumni visits, activities and engagement.			Adequate	Effective Development
2	Development of alumni support system for continued learning and career improvement.			Partial	Full Development
3	Development of “Online Learning Modules” for Alumni for Lifelong learning.			Under Process	Full Development
4	Alumni interaction through: <ul style="list-style-type: none"> <li><input type="checkbox"/> Interaction between alumni and students,</li> <li><input type="checkbox"/> Involvement of alumni for students mentoring,</li> <li><input type="checkbox"/> Interaction between alumni and faculty,</li> <li><input type="checkbox"/> Alumni members in Departmental BOS for curriculum development,</li> <li><input type="checkbox"/> Alumni linkage for student placements and internships,</li> <li><input type="checkbox"/> Alumni representation in IIC, IQAC and BOG of the Institute.</li> <li><input type="checkbox"/> Enhancing the innovation ecosystem</li> <li><input type="checkbox"/> Enhance alumni interaction during technical, cultural and sports activities organised by Institute.</li> </ul>			Partial	Effective Interaction
5	Engagement of alumni as adjunct faculty/visiting faculty.			Limited	Increase in Number
6	Conduction of courses/workshops/networking events for alumni.			Limited	Increase in Frequency
7	Development of online portal on Institute website to promote engagement between alumni, students and faculty members.			Portal Developed	Engagement through portal will be increased
8	Meetings/activities organized by Alumni Association			Adequate	Increase in Frequency
9	Development of “Extension & Outreach Cell” to explore the support and services towards community.			Through Different Committees	Effective Development
10	Effective use of “Business Development Centre” for Industry Linkage, start-up and incubation strengthening.			Established	Increase in Effectiveness
11	Motivating Joint Intellectual Property (IP) commercialisation with industries.			Partial	Full Support
12	Effective use of entrepreneurship development cell in the institute.			Adequate	Increase in Activities
13	Development of dedicated cell for research on societal problems.			Under Process	Development of Research Group



14	Enhancing interaction with industries, educational and research organizations in the region for versatile exposure to students and faculty.	Implemented	To be continued
15	Conduction of joint workshops/activities with govt. & NGO for students and local community.	Limited	Increase in Number
16	Conduction of joint research, workshop & Training programs with industries.	Limited	Increase in Number
17	Organising Public lectures/colloquia/competitions on global issues.	Limited	Increase in Number
18	Enhancing faculty engagement with industries.	Limited	Enhance through research & Development Activities
19	Conduction of training programs for Govt. staff/industry personals and other organizations.	Adequate	Increase in Activities
20	Conduction of students Competitions on city and state problems	Conducting through clubs & societies	Level & Quality Enhancement
21	Joint conduction of sport and cultural activities with other institutions and organizations.	Adequate	Increase in Activities
22	Establishment of MITS foundation to contribute to technical education and to address various social issues including development of financial resources	Under Progress	Effective Development

**(b) Internationalization**

Years	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Increase in the activities of International affairs cell to attract international students for admissions			Initiative Taken	Enhancement in Effectiveness
2	Enhance Institute information availability and publicity in target countries to attract students			Limited	Fully Developed System
3	Development of linkage with international universities			At Initial Stage	Adequate
4	Facilitate student exchange and joint-PhD programmes			--	Implementation of Student Exchange Program
5	Attract international faculty and students on short term engagement in conferences, GIAN courses & Conferences			Partial	Increase in Frequency
6	Attract international faculty on long term engagement in research and development activities			Limited	Effective Engagement
7	Increase percentage of International students (exchange students and regular students)			--	1%
8	Increase in admissions of International Students			--	25/per year
9	MOU with International University/Organization			Limited	Effective Collaboration for Micro level Activities

**Five Years Governance & Administration Plan**

Parameters	2023-24	2024-25	2025-26	2026-27	2027-28
NIRF Ranking	Under 200	<b>Under 100</b>	Under 100	Under 100	Under 100
NAAC Accreditation	A+	A+	A+	A+	A+
NBA Accreditation	06 Programmes	08 Programmes	10 Programmes	12 Programmes	14 Programmes

Total MoU/Collaboration with National Institute	25	30	35	35	40
Total MoU/Collaboration with International University	04	06	08	10	10
MoU/Collaboration with Industries	25	30	35	35	40
Conversion of Institute in to Degree Granting Institute/Deemed to be university	Acquired	Maintained	Maintained	Maintained	Maintained
Number of International Students (Off-campus)	10	20	25	30	35
Institutional visibility and peer perception	70%	70%	75%	85%	90%

<b>Quality Assurance</b>	<ul style="list-style-type: none"> <li>• NBA/NAAC Accreditation</li> <li>• NIRF Ranking</li> </ul>
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### Quality Assurance: **Accreditation**



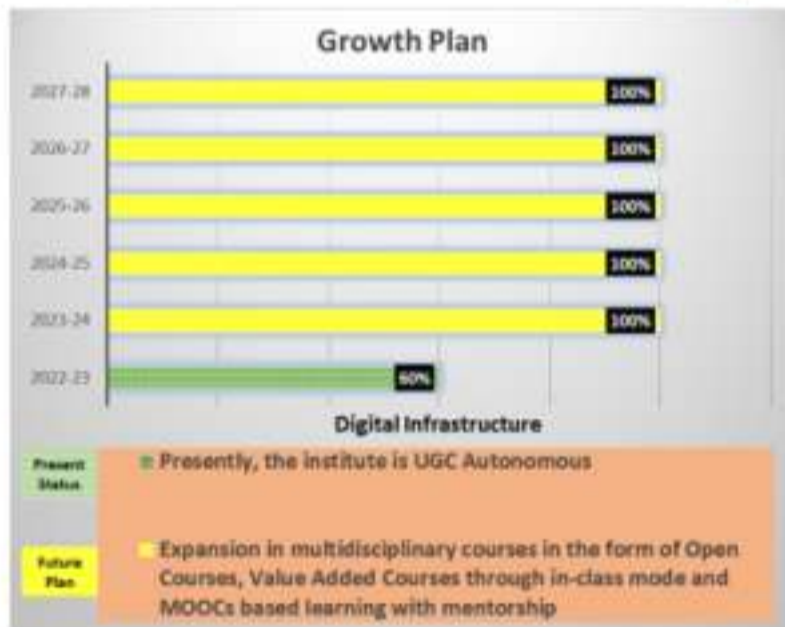
## Institute Recognition: **Ranking**



To attain the status of  
**“Teaching Intensive University”**  
 or  
**“Research Intensive University”**  
 or  
**“Autonomous Degree Granting College (AC)”**

- Expansion in multidisciplinary education and research activities
- Arrangement of resources as per the requirement of regulatory bodies
- Arrangement of Building, Amenities and other infrastructure [as needed for attaining the status of Teaching Intensive University or Autonomous Degree Granting College (AC)]
- Arrangement of faculty and staff as per norms

## Teaching Intensive University or Deemed to be University Status: **Towards More Flexibility and Academic Autonomy**



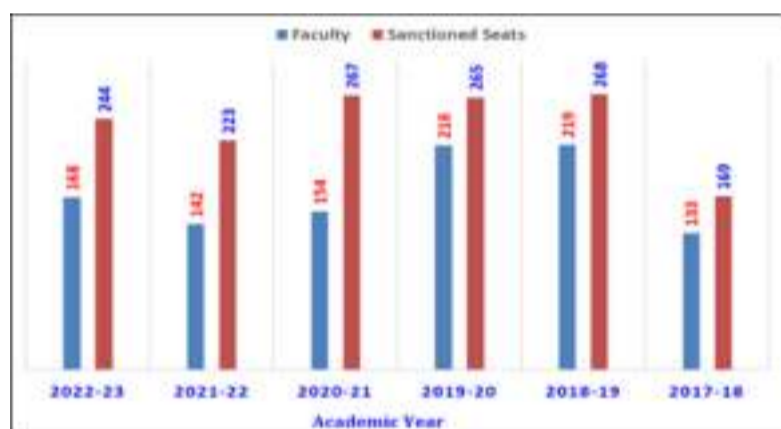
Faculty Recruitment & Human Resources Empowerment Plan

### Teaching & Non-Teaching Staff

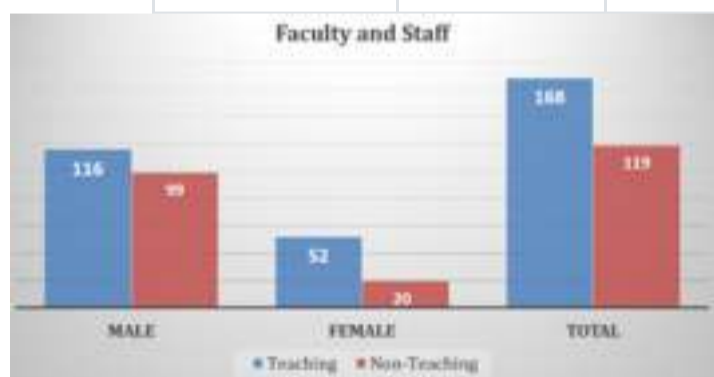
- Selection and or Promotion of faculty (Teaching posts): as per the MHRD/AICTE/CoA & MP Government rules and regulation (whichever applicable).
- Regular Staff: As per state government norms through Staff Selection Committee of the Institute constituted by Board of Governors from time to time.
- Non-Teaching posts will be as per the decision of Board of Governors from time to time and in force at the time of advertisement/recruitment. Minimum/ maximum age and educational qualifications: as per MHRD/AICTE/CoA/UGC & MP Government norms as applicable in force from time to time.
- Selection and or Promotion of faculty (Teaching posts): as per the MHRD/AICTE/CoA & MP Government rules and regulation.
- Promotion of class II, III & IV: as per M.P. Government rules adopted and approved by BoG.
- The General Service Rules/Conditions, code of conducts exists in the institute for the employees who are in service or will join the Institute in future.

The total number of faculty against the sanctioned positions for the last six years are as follows:

Academic Year	2022-23	2021-22	2020-21	2019-20	2018-19	2017-18
Number of Faculty	168	142	154	218	219	133
Sanctioned Seats	244	223	267	265	268	169



Faculty & Staff	Male	Female	Total
Teaching	116	52	168
Non-Teaching	99	20	119



### Fifteen Years Faculty Recruitment & Human Resources Empowerment Plan

Recruitment of Faculty will be done as per AICTE/COA/PCI requirement of cadre and faculty students ratio and to maintain the FSR as per Quality Assurance agencies like NBA/NAAC. The Effort will be made to appoint faculty in the field of specialization not available in the Institute/department. Overall target is to achieve Faculty Students Ratio below 1:20.

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Appointment of full time Quality teachers			FSR=1:25	FSR=1:20
2	Provision of Visiting /Adjunct/Emeritus faculty etc.			Implemented	To be continued
3	Off campus Faculty from Industry and academia			Implemented	To be continued
4	Recognition and appreciation for the faculty on receiving of fellowships, awards, recognition from Govt or recognized bodies at state/national/International level			Implemented	To be continued
5	Implementing Faculty Performance Appraisal and Development System			Implemented	To be continued
6	Providing API based promotion and rewards.			Implemented	Frequency Enhancement
7	Rewarding high-achieving faculty members once every year.			Implemented	To be continued
8	Promoting Faculty participation in Faculty development /training activities /STTPs			100% Support	To be continued
9	Providing Support to faculty members to obtain higher qualification			Implemented	To be continued
10	Recognition and support to faculty for participation in following activities: Sponsored Research/Product Development/Research laboratories/Instructional materials/Working models/charts/monograms etc./Consultancy (From Industry).			Implemented	To be continued
11	Providing Training support to technical & administrative staff for participation in staff development activities.			100%	100%
12	Motivation & support to achieve higher qualification during service.			Adequate	Increase in Numbers

### Five Years Faculty Recruitment Plan

The following proposed number of high quality faculty members will be recruited in next five years through a transparent open selection process:

**(a) Existing Programmes:**

Faculty/Resource Person	2023-24	2024-25	2025-26	2026-27	2027-28
Total [Target FSR1:20]	253	253	253	253	253
<b>Appointment of Faculty Members (Regular)</b>					
(i) Professor	3	2	1	1	-
(ii) Associate Professor	7	5	2	2	
(iii) Assistant Professor	20	13	7	7	
Appointment of Faculty Members (Full-time 03 year contract)	40	20	10	5	5
<b>Appointment of Adjunct Faculty, visiting Faculty and resource persons from Industry</b>					
(i) Adjunct Faculty from Industry	3	3	3	1	1
(ii) Resource Persons from Academia	3	3	3	1	1
(iii) Off campus Faculty from Industry and academia	7	7	7	6	6

**(b) Proposed Programmes**

Faculty/Resource Person	2023-24	2024-25	2025-26	2026-27	2027-28
Total [Target FSR1:20]	-	18	51	88	117
<b>Appointment of Faculty Members (Regular)</b>					
(i) Professor	-	02	04	07	09
(ii) Associate Professor	-	03	08	14	19
(iii) Assistant Professor	-	09	25	42	57
Appointment of Faculty Members (Full-time 03 year contract)	-	02	04	07	09
<b>Appointment of Adjunct Faculty, visiting Faculty and resource persons from Industry</b>					
(i) Adjunct Faculty from Industry	-	01	02	04	04
(ii) Resource Persons from Academia	-	01	02	04	04
(iii) Off campus Faculty from Industry and academia	-	02	06	10	15

**Students Admission Plan**

**Intake & Reservation policy:** The seats allocated for admission in UG and PG program are as per the sanctioned intake approved by AICTE and guidelines issued by AICTE & Directorate of Technical Education, Madhya Pradesh:

- The State Government/ UT/ Directorate of Technical Education/ Directorate of Medical Education shall ensure that 10% of reservation for Economically Weaker Section (EWS) as per the reservation policy for admission, operational from the Academic year 2019-20 without affecting the reservation percentages of SC/ ST/ OBC/ General.
- Tuition Fee Waiver (TFW) Scheme
  - d) Admission Procedure • Under this Scheme, up to a maximum of 5% of “Approved Intake” per Course shall be available for this admission.
- Supernumerary seats for the Union Territories J&K and Ladakh under Prime Minister’s Special Scholarship Scheme (PMSSS)
  - b) 2 seats per Course shall be available for these admission with the maximum of 10 seats per Institution. These seats shall be supernumerary in nature and shall be available to such Course(s) in an Institution.
    - CSAB-NEUT: CSAB North Eastern States and Some of Union Territories (NEUT)

**Total Sanctioned Seats are as follows:** Sanctioned Seats as per AICTE Approval letter+ EWS Seats +TFW Seats +PMSSS/ CSAB-NEUT Seats

As per the guidelines issued by Directorate of Technical Education, Madhya Pradesh for admission in UG and PG program in Autonomous and Govt. Aided institutes, 16%, 20% and 14% of the MP domicile candidates (90% of total seats) are reserved for candidates belonging to Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (excluding Creamy Layer) OBC categories respectively.

In addition to above, 3% seats in each category viz - UR, SC, ST and OBC shall be reserved for Physically handicapped candidates (with disability percentage of 40 or above and satisfying MP domicile requirements). This reservation is compartmentalized horizontal reservation and vacant seats in this category is filled by converting such seats into Open Seats of the NIL (X) category.

Availability of Seats: 90% Seats for MP domicile candidates 5% All India Seats 5% NRI Seats (All India Seats & NRI seats if not filled then converted into Seats for MP domicile candidates)

**Admissions:**

- As per Directorate of Technical Education, Madhya Pradesh/State Government norms, through Joint Entrance Exam (JEE)-Mains-I II for B.Tech./B.Arch. NATA for B.Arch.
- As per intake approved by AICTE, the admission for UG/PG students is online through state level counselling managed by the Directorate of Technical Education (DTE) of the state.
- Students of other states are admitted through Central Seat Allocation Board (CSAB) of Government of India.
- Foreign students are admitted through Ministry of External Affairs (GOI) Quota.

The total admissions against the sanctioned seats/intake for the last six years is as follows:

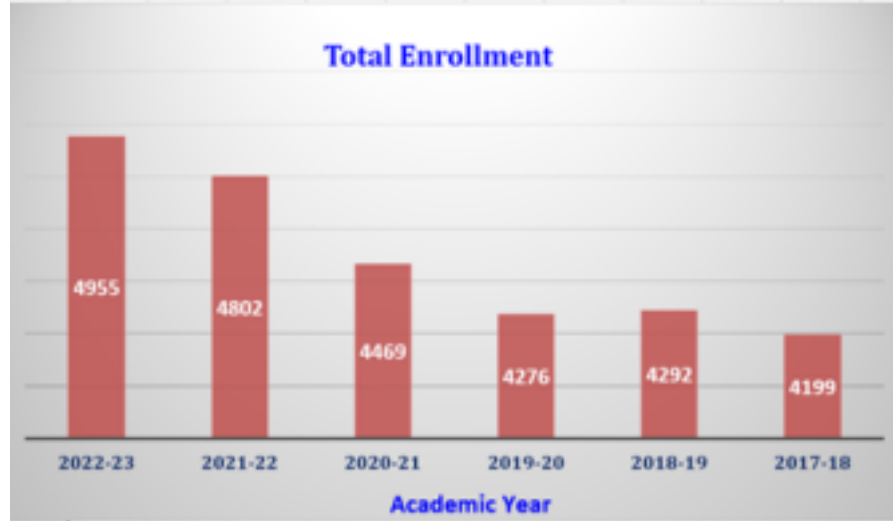
Academic Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Total Sanctioned Seats/Intake	1251	1187	1268	1605	1754	2164
Total Admissions	1144	1059	1097	1367	1445	1559



**Students**

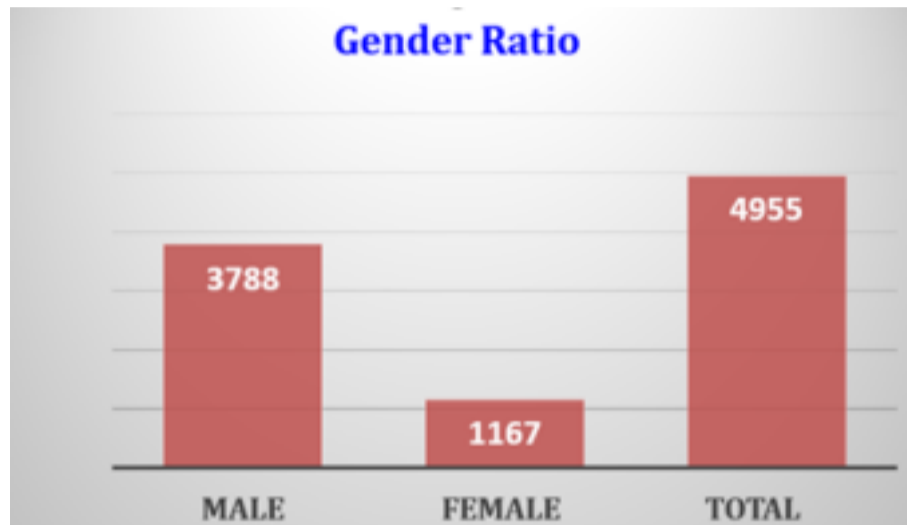
The total number of students enrolled during last six years are as follows:

2022-23	2021-22	2020-21	2019-20	2018-19	2017-18
4955	4802	4469	4276	4292	4199



Number of Students on roll by gender

- Male 3788
- Female 1167
- Transgender 0
- Total 4955



The admissions for Certificate, Diploma, Degree (UG & PG) and Ph.D. programmes for national and foreign students will be made purely on merit basis. The merit position of the candidate for admission will be based on the norms prescribed by the academic council of Institute. However, their eligibility for admission will be as per requirement of AICTE/UGC/other regulatory agency.

The Institute will offer Certificate, Diploma, Degree (UG & PG) and Ph.D. programmes as per NEP guidelines of off-campus & online education.

**Academic Bank of Credits** will be utilized to enable multiple entry-multiple exit for students to complete their degrees as per their time preferences, providing mobility across various disciplines and HEIs for Degree/ Diploma /Certificate programs programme. ABC will ensure the opening, closure, and validation of Academic Bank of Accounts, verification, accumulation, and transfer or redemption for students. ABC facilitate students to choose their own learning path to attain a degree /Diploma /Certificates, working on the principle of multiple entry-multiple exit as well as anytime, any-where, and any-level learning.

**Degree with Research at UG Level:** Provision will be available to undertake Analytical/Research/Knowledge based major project in the last semester of study to promote research in the degree level Institutions.

The proposed admissions in various Certificate, Diploma, Degree (UG & PG) and Ph.D. programmes is shown below:

Programmes	Certificate						Diploma					
	B.L.	I	II	III	IV	V	B.L.	I	II	III	IV	
Engineering & Technology	0	200	200	280	340	420	0	-	60	60	120	120
Architecture & Planning	0	20	20	20	20	20	0	-	-	-	-	-
Master in Computer Application (MCA)	0	20	20	20	20	20	0	-	-	-	-	-
Management	0	20	20	40	40	40	0	-	-	-	-	-
Pharmacy	0	-	20	20	20	20	0	-	30	30	30	30
Sciences	0	-	-	80	100	120	0	-	-	-	-	-
<b>Total</b>	<b>0</b>	<b>260</b>	<b>280</b>	<b>460</b>	<b>540</b>	<b>640</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>120</b>	<b>150</b>	<b>150</b>

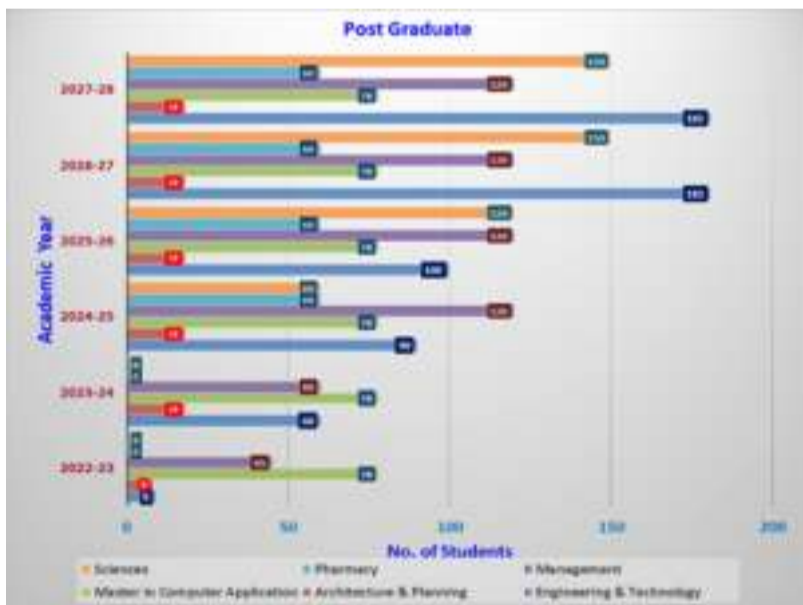
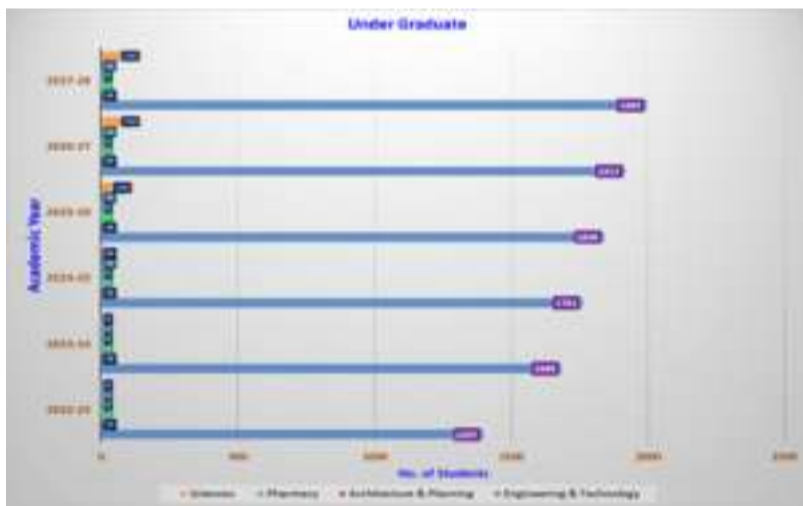
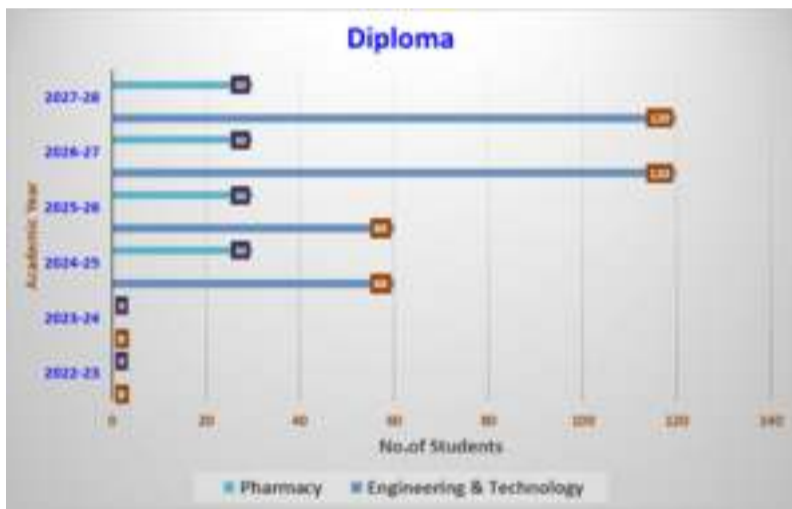
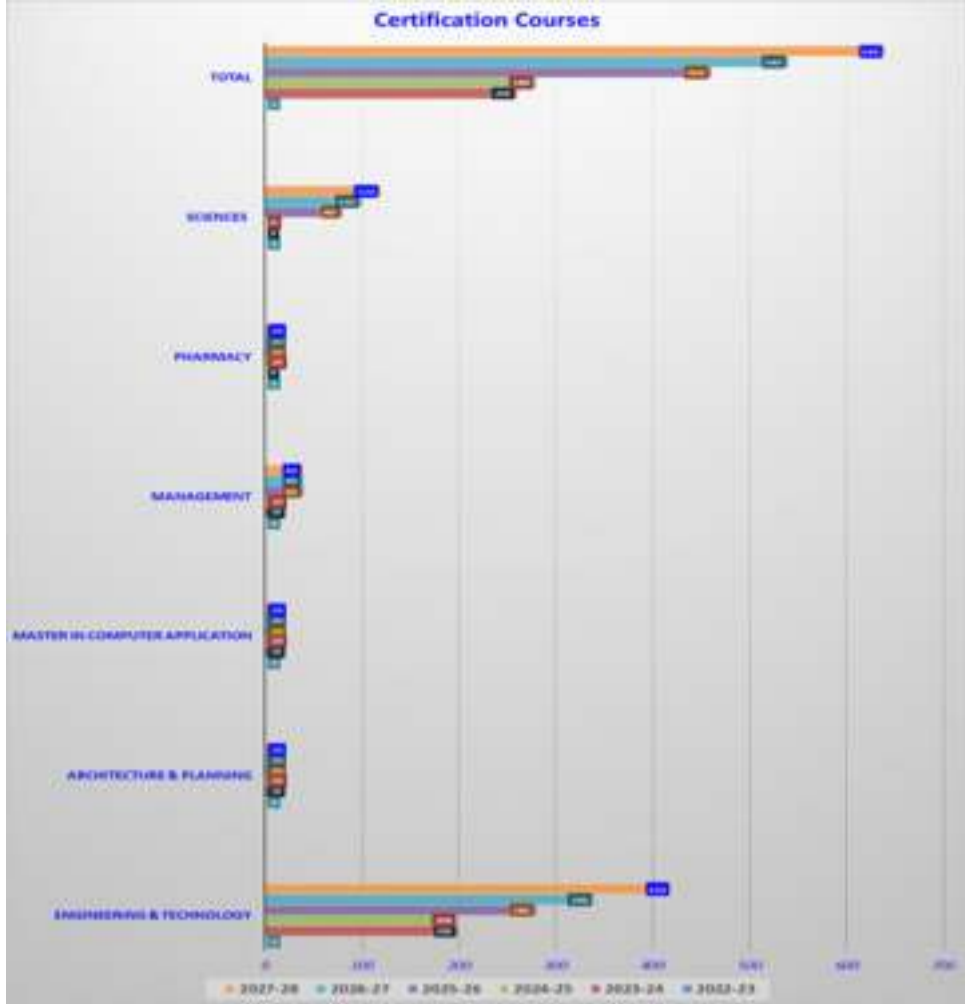


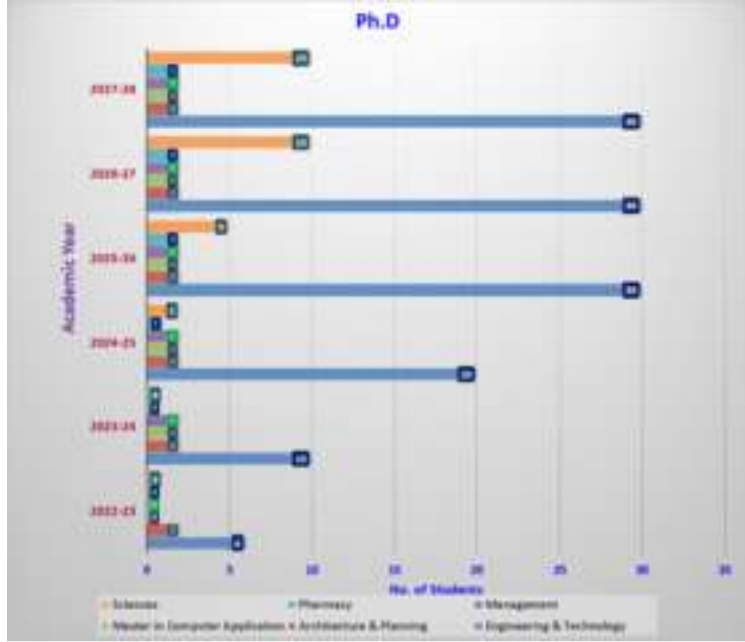
Programmes	UG						PG					
	B.L.#	I	II	III	IV	V	B.L.	I	II	III	IV	V
Engineering & Technology	1397	1683	1761	1839	1917	1995	9	60	90	100	181	181
Architecture & Planning	22	40	40	40	60	60	8	18	18	18	18	18
Master in Computer Application (MCA)	-	-	-	-	-	-	78	78	78	78	78	78
Management	-	-	-	-	-	-	45	60	120	120	120	120
Pharmacy	0	-	60	60	60	60	0	-	60	60	60	60
Sciences	0	-	60	120	150	150	0	-	60	120	150	150
<b>Total</b>	<b>1419</b>	<b>1723</b>	<b>1921</b>	<b>2059</b>	<b>2187</b>	<b>2265</b>	<b>140</b>	<b>216</b>	<b>426</b>	<b>496</b>	<b>607</b>	<b>607</b>

Programmes	Ph.D					
	B.L.	I	II	III	IV	V
Engineering & Technology	6	10	20	30	30	30
Architecture & Planning	2	2	2	2	2	2
Master in Computer Application (MCA)	-	2	2	2	2	2
Management	-	2	2	2	2	2
Pharmacy	-	-	1	2	2	2
Sciences	-	-	2	5	10	10
<b>Total</b>	<b>8</b>	<b>16</b>	<b>29</b>	<b>43</b>	<b>48</b>	<b>48</b>

B.L. : Baseline: 2022-23	I: 2023-24	II: 2024-25	III: 2025-26	IV: 2026-27	V: 2027-28
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Programmes	Total Admissions		
	2023-28	2028-33	2033-38
Certificate	1030	1200	1500
Diploma	510	700	1000
UG	11574	12000	15000
PG	2490	2700	3000
PH.D.	192	250	300





Campus Information & Communication Technology Plan

In today's digital age, Information and Communication Technology (ICT) has become a necessity for higher education institutions to effectively prepare students for the rapidly changing world. ICT enables institutes to offer a more modern and engaging learning experience, facilitate collaboration and communication among students and faculty, streamline administrative processes, and provide students with the technical skills required for success in their future careers. The increasing demand for ICT skills in the job market, coupled with the need for engineering colleges to keep pace with technological advancements, makes it imperative for institutions to incorporate ICT into their programs and operations. Without ICT, engineering colleges risk falling behind their peers and failing to adequately prepare their students for the challenges of the future.



**Scope:** There are some of the areas where ICT can be applied in the institute:

1. **Learning Management Systems:** to develop and manage learning management systems which can provide students with access to course materials, assignments, and assessments. These systems can also facilitate communication between students and faculty, allowing for more effective collaboration and feedback.
2. **Virtual Labs and Simulations:** the development of virtual labs and simulations that provide students with hands-on experience in a safe and controlled environment. This can be particularly useful in areas like engineering design and analysis, where physical prototypes can be expensive and time-consuming to create.
3. **Computer-Aided Design and Manufacturing:** to develop and use computer-aided design (CAD) software, which enables students to create, modify, and analyze 3D models of products and systems. Similarly, computer-aided manufacturing (CAM) can be used to control manufacturing processes, such as CNC machining and 3D printing.
4. **Cyber security:** As technology becomes increasingly integrated into every aspect of our lives, cyber security is becoming more critical. ICT can be used to develop and teach cyber security skills to students, enabling them to identify and mitigate security threats in systems and networks.
5. **Data Analytics:** The vast amounts of data generated in the engineering field can be challenging to manage and analyze. ICT can be used to develop and teach data analytics skills, enabling students to extract insights from large data sets and make data-driven decisions.

## Five year Plan (2023-2028)

### 2023-2024

- In the first year, the focus will be on developing a strong foundation for the university's ICT infrastructure. This includes upgrading the network infrastructure, installing high-speed internet connectivity.
- Implement a comprehensive learning management system (LMS) that enables students to access course materials, assignments, assessments, and collaborative tools: To enable effective distance learning, a robust Learning Management System (LMS) will be implemented. This system will allow students to access course materials, assignments, assessments, and collaborative tools. Faculty members will be trained to effectively use the LMS and create engaging course materials.
- Develop and implement a program to train faculty and staff on the use of ICT tools and technologies: To ensure faculty and staff can use the new technologies and systems, a training program will be implemented. This program will include training on the use of the LMS, cloud-based computing, cybersecurity measures, and other technologies.

### 2024-2025

1. **Implement a cloud-based infrastructure that supports greater scalability and flexibility:** This involves adopting a cloud-based computing system, which allows the college to store, access, and manage its data and applications over the internet. The advantages of this approach include greater scalability, flexibility, and cost savings.

2. Develop an online assessment and grading system that provides students with real-time feedback and progress tracking: This involves creating an online platform for student assessment and grading, which would allow students to receive feedback and track their progress in real-time.
3. Implement digital signage and kiosks around campus that provide real-time information on events, schedules, and university news: This involves installing digital displays and kiosks throughout the campus to provide students, faculty, and staff with real-time information on events, schedules, and university news. These displays and kiosks can be interactive, allowing users to navigate and explore campus resources, and can also be used to provide emergency notifications and alerts.

#### 2025-2026

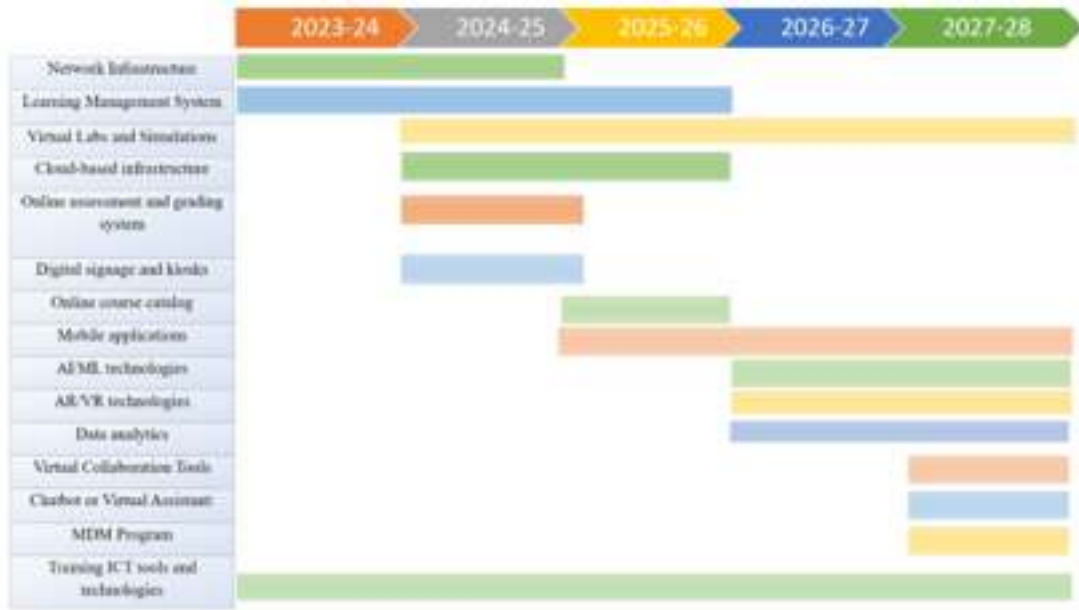
1. Expand the use of virtual labs and simulations to provide students with hands-on experience in engineering and science courses: This involves incorporating more virtual labs and simulations into the curriculum to provide students with hands-on experience in engineering and science courses.
2. Develop and launch an online course catalog that enables students to browse and register for courses online: This involves creating an online platform that enables students to browse and register for courses online. The online course catalog would provide students with up-to-date information on course offerings, schedules, prerequisites, and other relevant information.
3. Develop a mobile application that enables students to access course materials, schedules, and other university resources from their mobile devices: This involves developing a mobile application that enables students to access course materials, schedules, and other university resources from their mobile devices.

#### 2026-2027

1. Explore the use of artificial intelligence (AI) and machine learning (ML) to improve teaching and learning outcomes: This involves investigating the use of AI and ML technologies to improve teaching and learning outcomes in engineering and science courses.
2. Expand the use of augmented and virtual reality (AR/VR) technologies in engineering and science courses: This involves expanding the use of AR/VR technologies in engineering and science courses to provide students with immersive and interactive learning experiences.
3. Implement a data analytics program that enables faculty and students to extract insights from large data sets: This involves implementing a data analytics program that enables faculty and students to extract insights from large data sets generated by research projects, experiments, and other academic activities.

#### 2027-2028

1. Mobile Device Management (MDM) Program: The first component of the plan is to develop an MDM program that enables the university to securely manage and distribute mobile devices to students and staff. With the increasing reliance on mobile devices for learning and work, it is important to have a program that can ensure the security and privacy of data on these devices. The MDM program will enable the institute to remotely manage and update mobile devices, enforce security policies, and track device usage.
2. Chatbot or Virtual Assistant: The second component of the plan is to implement a chatbot or virtual assistant that can answer student inquiries and provide assistance 24/7. With the increasing demand for online learning and support, a chatbot or virtual assistant can provide immediate assistance to students, without the need for human intervention. The chatbot or virtual assistant will be able to answer common questions, provide guidance on assignments and assessments, and direct students to appropriate resources.
3. Virtual Collaboration Tools: The third component of the plan is to expand the use of virtual collaboration tools, such as video conferencing and virtual whiteboards, to enable remote collaboration among students and faculty members across different locations and time zones. With the increasing popularity of remote learning and working, it is important to have tools that can facilitate collaboration and communication among team members.



### ICT Plan for 2028-2033

- **Smart Campus Technology:** Implement a smart campus technology system that will provide real-time data on energy consumption, occupancy rates, and other important information. This technology will enable the university to optimize its resources and improve sustainability.
- **Cybersecurity Measures:** Strengthen cyber security measures by implementing advanced security protocols and technologies to protect the university's sensitive data from cyber threats.
- **Internet of Things (IoT) Integration:** Integrate IoT devices into the university's infrastructure to enable real-time monitoring and control of campus facilities, such as lighting, temperature, and air quality.
- **Blockchain Technology:** Explore the use of blockchain technology to create a secure and decentralized system for managing student records and academic credentials.
- **Data Analytics and Visualization:** Implement a data analytics and visualization program to enable faculty and students to extract insights from large data sets and make data-driven decisions.
- **Quantum Computing:** Explore the potential of quantum computing in solving complex engineering problems and develop a plan for integrating this technology into the university's infrastructure.
- **Social Media and Marketing:** Develop a comprehensive social media and marketing strategy to promote the university's brand and attract top talent to its engineering programs.

### ICT Plan for 2033-2038

- **Quantum Computing:** Fully integrate quantum computing into the university's infrastructure and curriculum, allowing students and faculty members to explore and solve complex engineering problems using this cutting-edge technology.
- **Robotics and Automation:** Expand the use of robotics and automation in engineering courses, providing students with hands-on experience in designing, building, and programming robots and automated systems.
- **Immersive Learning Environments:** Develop immersive learning environments using technologies such as virtual reality, augmented reality, and mixed reality to provide students with realistic and interactive simulations that enhance their learning experience.
- **Smart City Integration:** Collaborate with local municipalities to integrate the university's infrastructure with the smart city technologies, creating a more connected and sustainable community.
- **Digital Twins:** Develop a digital twin of the university's infrastructure, allowing for real-time monitoring and optimization of campus facilities, and providing students with a virtual model for experimentation and learning.
- **Internet of Things (IoT) Security:** Enhance IoT security protocols to ensure the safety and privacy of the university's data, devices, and infrastructure.
- **Personalized Learning:** Develop a personalized learning system that uses artificial intelligence and machine learning to tailor course content and assessments to individual students' learning needs and preferences.

### Finance Plan

The Finance plan is prepared for next fifteen year based on proposed academics & Administrative activities, further the income and expenditure plan for next five years is prepared:

Year	2023-2028	2028-2033	2033-2038	Status	Intervention
1	Increase internal revenue through masters & Ph.D. level courses, executive programmes and professional courses.			5%	10%
2	Increase research & Development grant from Central & State Government.			3.28%	7%
3	Increase research projects from industry			Limited	1 Per Program
4	Increase internal revenues via consultancy and industry R&D receipts			1%	5%
5	Cultivating Industry linkages to attract corporate social responsibility (CSR) funding.			Initiative Taken	Development of Effective System
6	Increase in financial support from alumni			Initiative taken	Development of Effective System
7	Developing approach to donations and for enhanced engagement with stake holders.			Initiative Taken	Development of Effective System

## Five Year Finance Plan

### (a) Fund Requirement

Expenditure Head		Fund Requirement in Financial Year					Total
		2023-24 (Lakhs)	2024-25 (Lakhs)	2025-26 (Lakhs)	2026-27 (Lakhs)	2027-28 (Lakhs)	
Infrastructure Development	New Academic Block	400	-	-	-	-	400
	Centre for Advanced Learning and Training	-	-	-	200	-	200
	Auditorium	415	1000	722	-	-	2137
	Business & Pharmacy School	-	200	500	300	200	1200
	Smart Class Rooms	60	60	80	80	90	370
	Laboratory & Central Facility, Digital Infrastructure Development	80	100	100	150	150	580
	Refurbishment & Maintenance of existing Infrastructure	112	90	110	110	120	542

Up-gradation & Procurement of Learning Resources, Digitization and IT support facilities	50	50	50	50	50	250
Academic Activities (Faculty & Students)	50	50	50	50	50	250
Expenditure on Salary & Services	4510	4730	4970	5620	5900	25730
Other Expenditure	543	346	370	503	635	2397
<b>Total</b>	<b>6220</b>	<b>6626</b>	<b>6952</b>	<b>7063</b>	<b>7195</b>	<b>34056</b>

**(b) Projection of Fund**

Fund Sources	Projection of fund in Financial Year					
	2023-24 (Lakhs)	2024-25 (Lakhs)	2025-26 (Lakhs)	2026-27 (Lakhs)	2027-28 (Lakhs)	Total
State Govt.	626	626	626	626	626	3130
Central Agencies (MHRD/UGC/ AICTE/DST/CSIR/etc)	100	100	100	100	100	500
Tuition Fee	3658	3953	4158	4158	4158	20085
Other fee	1826	1927	2038	2149	2271	10211
IRG (Testing, Consultancy etc)	510	520	530	530	540	2630
<b>Total</b>	<b>6720</b>	<b>7126</b>	<b>7452</b>	<b>7563</b>	<b>7695</b>	<b>36556</b>
Corpus Fund	500	500	500	500	500	2500
Proposed Expenditure	6220	6626	6952	7063	7195	34056
<b>Total</b>	<b>6720</b>	<b>7126</b>	<b>7452</b>	<b>7563</b>	<b>7695</b>	<b>36556</b>

**Conclusion**



- The institute has a 65-year old legacy; its alumni have attained distinction all over the globe during the past 60 years. A steady growth has been maintained over the years. A commitment to quality has always been the defining principle at MITS. The administration is transparent and decentralized and the policies are well documented.
- During the last five years, a large number of quality initiatives have been taken by the IQAC in-line with the national policies, guidelines of regulatory bodies, UN's sustainable development goals, guidelines of the outcome based education (OBE), global market needs & trends resulting in the present Flexible Curriculum of the institute with integration of NEP-2020 provisions. The quality practices adopted by the institute are dynamic, are revised as per the changing needs and monitored continuously till these are institutionalized.
- The institute, in July 2020, prepared an exhaustive Action Plan for implementing NEP-2020. Out of the 22 targeted parameters for the year 2024-2025, twenty parameters have already been undertaken; either completed or are being manifested through various endeavors.
- MITS is at present the only institute in the state where examination reforms are effectively implemented and Multiple Mode Logical Pattern Examination (MMLPE) system is in place. The mode of examination is decided by the nature of the subject/course and the learning levels to be assessed.
- The existence of large number of student clubs & chapters, mandatory multidisciplinary electives, inhouse internship programmes, award of U.G. degree with Minor Specialization in other disciplines or Honors in parent discipline are some of the unique practices.
- Quality is a journey and the major milestones achieved by the institute during the last five years are development and effective implementation of Flexible Curriculum with integration of the key NEP-2020 parameters and provisions, creating a culture of self-learning through online courses/MOOCs, facilitating credit transfer through MOOCs and establishing a dynamic teaching-learning-evaluation environment through a highly effective & functional MITS-MOODLE. With these initiatives, MITS has emerged as a leader in the field of technical education in the state and region.

Thus, the institute has established a unique curricular and teaching-learning structure, making full use of the autonomy granted by the UGC and is now ready to take on the mantle of a 'Deemed to be University'. This status will immensely help in taking the quality initiatives to the next level and in fulfilling the government mandate of providing a holistic system of technical education that can prepare well rounded individuals for serving the future global needs and strengthen the nation in becoming the Vishwa Guru.

[View Document](#)

Whether the information uploaded on the DTBU Web Portal has also been publicly disclosed on the website of the Institution duly certified by the Head : Yes (<https://web.mitsqwalior.in/index.php/dpr>)

## 2. Details of academic & physical infrastructure:

<b>Title of the land</b> : Madhav Institute of Technology & Science	<b>Areas of total land available In acres:</b> 44.68
<b>Areas of total land available In Sq. Meters:</b> 180814	<b>Land Type:</b> Free hold
<b>In case of Lease hold,Period of Lease hold (month) :</b> 0	<b>Administrative building (Total Built-up area (in Sq. Meters)) :</b> 3186
<b>Academic building (Total Built-up area (in Sq. Meters)) :</b> 28267	<b>Departmental Library and Central Library (Total Built-up area (in Sq. Meters)) :</b> 1076.21
<b>Others facilities (Total Built-up area (in Sq. Meters)) :</b> 3186	<b>No. of Lecture halls :</b> 55
<b>No. of Hostels (Boys &amp; Girls separately) with students accommodation :</b> 4	<b>No. of teacher residence with faculty accommodation :</b> 22

Other common and recreational facilities : [View Document](#)

Seating Capacity	Land Area(in Sq. Meters)	Location
400	322	First Floor

3. Corpus fund:

Details of Corpus Fund (Undertaking to the effect that the Corpus Fund to be created shall be irrevocable in nature and the interest accrued on it shall be used only for the purpose of development of the Institution Deemed to be University) :

4. No Objection Certificate (NoC) / Views of the State Government: [View Document](#)

5. Details of the not-for-profit Society/Trust/Company established for Deemed to be University:

i.	Whether the applicant sponsoring body has been established exclusively for running educational institutions?(Upload the Registration certificate as well as Registered Deed which specifies that the sponsoring body is exclusively for running educational activities and no other activities are being carried out or shall be carried out in future under it).	<a href="#">View Document</a>
ii.	(a) Whether a separate not-for-profit Society/Trust/Company in the name of Deemed to be University has been created?	<a href="#">View Document</a>
iii.	III. Whether all the moveable and immoveable assets are legally registered in the name of the Deemed to be University?	<a href="#">View Document</a>
iv.	IV. Legal undertaking to the effect that all moveable and immoveable assets of the institutions shall be used only for the purpose of conducting academic activities, promotion of research and related administrative requirements of the Institution Deemed to be University?	<a href="#">View Document</a>

6. Department-wise teacher student ratio:-

Department	Year of Starting	Program	Student in Department	Teacher in Department	Teacher - Student ratio
Civil Engineering	1956	3	520	16	32.00
Mechanical Engineering	1956	3	564	19	29.00
Electrical Engineering	1956	3	731	21	34.00
Electronics Engineering	1982	3	791	17	46.00
Computer Science & Engineering	1994	4	869	25	34.00
Information Technology	2000	6	971	29	33.00
Chemical Engineering	1996	1	128	5	25.00
Engineering Mathematics and Computing	2020	1	196	11	17.00
Management	2019	1	90	5	18.00
Architecture & Planning	1984	2	133	12	11.00
Applied Science	1957	0	0	6	0.00
Humanities	1957	0	0	1	0.00

## 7. Department-wise list of faculty:-

Department	Name	Designation	Qualification	No of Research publication	Pay Scale
Mechanical Engineering	Dr. Gavendra Norkey	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-3] [PEER:-0]	57700-182400
Civil Engineering	Dr. Abhilash Shukla	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-3] [PEER:-0]	57700-182400
Electronics Engineering	Dr. Sushmita Chaudhari	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-8] [PEER:-0]	57700-182400
Electronics Engineering	Dr. Shubhi Kansal	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-5] [PEER:-4]	57700-182400
Electronics Engineering	Dr. Varun Sharma	Assistant Professor	Ph.D.	[SCOPUS:-18] [WOS:-18] [PEER:-0]	57700-182400
Information Technology	Dr. Tej Singh	Assistant Professor	Ph.D.	[SCOPUS:-4] [WOS:-5] [PEER:-7]	57700-182400
Information Technology	Dr. Pawan Dubey	Assistant Professor	Ph.D.	[SCOPUS:-15] [WOS:-7] [PEER:-25]	57700-182400
Information Technology	Dr. Dhananjay Bisen	Assistant Professor	Ph.D.	[SCOPUS:-15] [WOS:-10] [PEER:-0]	57700-182400
Information Technology	Dr. Vikram Rajpoot	Assistant Professor	Ph.D.	[SCOPUS:-21] [WOS:-10] [PEER:-24]	57700-182400
Electrical Engineering	Mr. Ankit Tiwari	Assistant Professor	Ph.D.#	[SCOPUS:-3] [WOS:-0] [PEER:-2]	57700-182400
MAC	Dr. Minakshi	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-0] [PEER:-2]	57700-182400
MAC	Dr. Atul Kumar Ray	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-4] [PEER:-5]	57700-182400
Computer Science & Engineering	Dr. Ranjeet Kumar Singh	Assistant Professor	Ph.D.	[SCOPUS:-12] [WOS:-9] [PEER:-3]	57700-182400
MAC	Dr. Divya Chaturvedi	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-1] [PEER:-2]	57700-182400
Information Technology	Dr. Abhishek Dixit	Assistant Professor	Ph.D.	[SCOPUS:-6] [WOS:-5] [PEER:-0]	57700-182400
Computer Science & Engineering	Mr. Vivek Sharma	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-1]	57700-182400

Information Technology	Dr. Bhagat Singh Raghuwanshi	Assistant Professor	Ph.D.	[SCOPUS:-16] [WOS:-16] [PEER:-16]	57700-182400
Electrical Engineering	Dr. Nikhil Paliwal	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-4] [PEER:-0]	57700-182400
Electrical Engineering	Dr. Yashwant Sawle	Assistant Professor	Ph.D.	[SCOPUS:-24] [WOS:-14] [PEER:-7]	57700-182400
Information Technology	Dr. Nidhi Saxena	Assistant Professor	Ph.D.	[SCOPUS:-11] [WOS:-11] [PEER:-11]	57700-182400
Computer Science & Engineering	Ms. Smita Parte	Assistant Professor	Ph.D.#	[SCOPUS:-3] [WOS:-2] [PEER:-3]	57700-182400
Electrical Engineering	Dr. Bhavna Rathore	Assistant Professor	Ph.D.	[SCOPUS:-4] [WOS:-4] [PEER:-0]	57700-182400
Electrical Engineering	Dr. Saurabh Kumar Rajput	Assistant Professor	Ph.D.	[SCOPUS:-16] [WOS:-5] [PEER:-0]	57700-182400
Information Technology	Mr. Aditya Dubey	Assistant Professor	Ph.D.#	[SCOPUS:- 7] [WOS:-2] [PEER:-0]	57700-182400
Information Technology	Dr. Anshika Srivastava	Assistant Professor	Ph.D.	[SCOPUS:-21] [WOS:-23] [PEER:-24]	57700-182400
Information Technology	Dr. Kritika Bansal	Assistant Professor	Ph.D.	[SCOPUS:- 8] [WOS:-15] [PEER:-17]	57700-182400
Information Technology	Dr. Ana Kumar	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	57700-182400
Computer Science & Engineering	Dr. Devesh Kumar Lal	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-3] [PEER:-5]	57700-182400
Electrical Engineering	Dr. Kaushal Pratap Sengar	Assistant Professor	Ph.D.	[SCOPUS:-4] [WOS:-4] [PEER:-5]	57700-182400
Computer Science & Engineering	Dr. Gagandeep Kaur	Assistant Professor	Ph.D.	[SCOPUS:-6] [WOS:-6] [PEER:-6]	57700-182400
Information Technology	Dr. Sunil Kumar Shukla	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-8] [PEER:-14]	57700-182400
Electrical Engineering	Dr. Murli Manohar	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-14] [PEER:-0]	57700-182400
Information Technology	Dr. Vibha Tiwari	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-0] [PEER:-0]	57700-182400

Electrical Engineering	Dr. Gaurav Khare	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-4] [PEER:-0]	57700-182400
Computer Science & Engineering	Dr. Kuldeep Narayan Tripathi	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-7] [PEER:-7]	57700-182400
Computer Science & Engineering	Dr. Rohit Agrawal	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-7]	57700-182400
Information Technology	Dr. Priyanka Garg	Assistant Professor	Ph.D.	[SCOPUS:-10] [WOS:-12] [PEER:-0]	57700-182400
Information Technology	Dr. Ashish Soni	Assistant Professor	Ph.D.	[SCOPUS:-3] [WOS:-3] [PEER:-6]	57700-182400
Information Technology	Dr. Nookala Venu	Assistant Professor	Ph.D.	[SCOPUS:-31] [WOS:-5] [PEER:-25]	57700-182400
Information Technology	Mr. Mir Shahnawaz Ahmad	Assistant Professor	Ph.D.#	[SCOPUS:-5] [WOS:-4] [PEER:-5]	57700-182400
Information Technology	Ms. Shubha Mishra	Assistant Professor	Ph.D.#	[SCOPUS:-4] [WOS:-1] [PEER:-10]	57700-182400
Electronics Engineering	Dr. Sandeep Sharma	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	57700-182400
Civil Engineering	Dr. Jayvant Choudhary	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	57700-182400
Civil Engineering	Dr. Chayan Gupta	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	57700-182400
Architecture & Planning	Ms. Richa Mishra	Assistant Professor	M.Arch	[SCOPUS:-0] [WOS:-0] [PEER:-7]	45000
Architecture & Planning	Ms. Pranshi Jain	Assistant Professor	M.Arch	[SCOPUS:-0] [WOS:-0] [PEER:-4]	45000
Architecture & Planning	Ms. Versha Sinha	Assistant Professor	M.Arch	[SCOPUS:-0] [WOS:-0] [PEER:-1]	45000
Architecture & Planning	Mr. Ankit Kumar	Assistant Professor	M.Arch	[SCOPUS:-0] [WOS:-0] [PEER:-1]	45000
Management (MBA)	Dr. Namrata Gupta	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	45000
Chemical Engg.	Dr. Rakesh Kumar Dubey	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-4] [PEER:-0]	45000

Mechanical Engineering	Dr. Ravi Kant Ranjan	Assistant Professor	Ph.D.	[SCOPUS:-2] [WOS:-0] [PEER:-0]	45000
Mechanical Engineering	Dr. Neeraj Mishra	Assistant Professor	Ph.D.	[SCOPUS:-6] [WOS:-3] [PEER:-3]	45000
Mechanical Engineering	Mr. Ajay Singh Rajput	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	45000
Computer Science & Engineering	Mr. Arun Kumar	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-1]	45000
Electrical Engineering	Mr. Manoj Kumar	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	45000
Architecture & Planning	Mr. Satyam Shukla	Assistant Professor	M.Plan	[SCOPUS:-0] [WOS:-0] [PEER:-1]	45000
MAC	Dr. S.K. Bhardwaj	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-07]	35000
MAC	Dr. D.K. Mishra	Assistant Professor	Ph.D.	[SCOPUS:-01] [WOS:-0] [PEER:-09]	35000
Computer Science & Engineering	Ms. Hemlata Arya	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	35000
Computer Science & Engineering	Ms. Kratika Sharma	Assistant Professor	M.Tech	[SCOPUS:-1] [WOS:-0] [PEER:-0]	30000
Architecture & Planning	Ms. Harshita Mishra	Assistant Professor	M.Plan	[SCOPUS:-0] [WOS:-0] [PEER:-1]	30000
Architecture & Planning	Mr. Mragank Gupta	Assistant Professor	M.Arch	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Architecture & Planning	Ms. Jaspreet Walia	Assistant Professor	M.Plan	[SCOPUS:-0] [WOS:-0] [PEER:-2]	30000
Computer Science & Engineering	Ms. Jigyasa Mishra	Assistant Professor	M.Tech	[SCOPUS:-3] [WOS:-1] [PEER:-10]	30000
Information Technology	Ms. Akanchha Tiwari	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-3]	30000
Information Technology	Ms. Bulbul Agrawal	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-3]	30000
Chemical Engg.	Ms. Shivangi Sharma	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-7]	30000

Management (MBA)	Mr. Ashvini K. Shrivastava	Assistant Professor	MBA	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Civil Engg.	Mr. Akash Gaur	Assistant Professor	M.Tech	[SCOPUS:-1] [WOS:-0] [PEER:-0]	30000
Civil Engg.	Mr. Shailendra Harioudh	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Computer Science & Engineering	Ms. Aashi Singh Bhadouria	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-5]	25000
Computer Science & Engineering	Ms. Manisha Pathak	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-6]	25000
Applied Science (Physics)	Dr. Ashok Kumar Sharma	Assistant Professor	Ph.D.	[SCOPUS:-0] [WOS:-0] [PEER:-3]	35000
Applied Science (Physics)	Dr. Preeti Gupta	Assistant Professor	Ph.D.	[SCOPUS:-4] [WOS:-0] [PEER:-10]	35000
MAC	Mr. Ashish Shukla	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Architecture & Planning	Ms. Namita Gupta	Assistant Professor	MUP	[SCOPUS:-0] [WOS:-0] [PEER:- 2]	30000
Mechanical Engineering	Mr. Utkarsh Shrivastava	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	45000
Management (MBA)	Mr. Pooja Saikia	Assistant Professor	MBA	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Information Technology	Ms. Namrata Agrawal	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	45000
Computer Science & Engineering	Ms. Sapna Kushwah	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Computer Science & Engineering	Ms. Ankita Sengar	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-0]	30000
Applied Science	Dr. Sabeer Ahamad Khandy	Assistant Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-0]	25000
Civil Engineering	Prof. Archana. Tiwari	Professor	M.E.	[SCOPUS:-0] [WOS:-0] [PEER:-22]	144200-218200
Electrical Engineering	Dr. Manjaree Pandit	Professor	Ph.D	[SCOPUS:-113] [WOS:-105] [PEER:-0]	144200-218200

Electronics Engineering	Dr. Sarita Singh Bhadoria*	Professor	Ph.D		144200-218200
Civil Engineering	Dr. Rajeev Kansal	Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-33]	144200-218200
Applied Science	Dr. Abhay Mishra	Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-18]	144200-218200
Architecture & Planning	Dr. Alok Sharma*	Professor	Ph.D		144200-218200
Computer Science & Engineering	Dr. Rajendra Kumar Gupta	Professor	Ph.D	[SCOPUS:-15] [WOS:-4] [PEER:-0]	144200-218200
Electrical Engineering	Dr. Arun Kumar Wadhvani	Professor	Ph.D	[SCOPUS:-61] [WOS:-36] [PEER:-0]	144200-218200
MCA	Dr. Rakesh Singh Jadon	Professor	Ph.D	[SCOPUS:-38] [WOS:-0] [PEER:-81]	144200-218200
Civil Engineering	Dr. Sarvesh Kumar Jain	Professor	Ph.D	[SCOPUS:-12] [WOS:-5] [PEER:-10]	144200-218200
Electronics Engineering	Dr. Pramod Kumar Singhal	Professor	Ph.D	[SCOPUS:-102] [WOS:-67] [PEER:-257]	144200-218200
Architecture & Planning	Dr. Sanjay Singh Jadon	Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-18]	144200-218200
Civil Engineering	Dr. Manoj Kumar Trivedi	Professor	Ph.D	[SCOPUS:-15] [WOS:-10] [PEER:-60]	144200-218200
Civil Engineering	Dr. Sanjay Tiwari	Professor	Ph.D	[SCOPUS:-3] [WOS:-1] [PEER:-23]	144200-218200
Electrical Engineering	Dr. Sulochana Wadhvani	Professor	Ph.D	[SCOPUS:-57] [WOS:-0] [PEER:-0]	144200-218200
Mechanical Engineering	Dr. Pratesh Jayaswal	Professor	Ph.D	[SCOPUS:-17] [WOS:-9] [PEER:-24]	144200-218200
Mechanical Engineering	Dr. Chandrashekhar Malvi	Professor	Ph.D	[SCOPUS:-21] [WOS:-12] [PEER:-44]	144200-218200
Mechanical Engineering	Dr. Manoj Kumar Gaur	Professor	Ph.D	[SCOPUS:-43] [WOS:-43] [PEER:-42]	144200-218200
Mechanical Engineering	Dr. Manish Kumar Sagar	Professor	Ph.D	[SCOPUS:-3] [WOS:-1] [PEER:-31]	144200-218200



Information Technology	Dr. Akhilesh Tiwari	Professor	Ph.D	[SCOPUS:-30] [WOS:-13] [PEER:-31]	144200-218200
MCA	Dr. Anshu Chaturvedi	Professor	Ph.D	[SCOPUS:-8] [WOS:-0] [PEER:-15]	144200-218200
Computer Science & Engineering	Dr. Manish Dixit	Professor	Ph.D	[SCOPUS:-9] [WOS:-0] [PEER:-45]	144200-218200
MAC	Dr. Vikas Shinde	Professor	Ph.D	[SCOPUS:-4] [WOS:-00] [PEER:-43]	144200-218200
MAC	Dr. Deepak Kumar Jain	Professor	Ph.D	[SCOPUS:-8] [WOS:-5] [PEER:-34]	144200-218200
Civil Engineering	Mr. Anil Kumar Dwivedi	Associate Professor	M.E.	[SCOPUS:-0] [WOS:-0] [PEER:-10]	131400-217100
Civil Engineering	Mr. Anil Kumar Saxena	Associate Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-12]	131400-217100
Electrical Engineering	Mr. Ashis Patra	Associate Professor	M.E.	[SCOPUS:-0] [WOS:-0] [PEER:-0]	131400-217100
Electronics Engineering	Dr. Vandana Vikas Thakare	Associate Professor	Ph.D	[SCOPUS:-24] [WOS:-15] [PEER:-121]	131400-217100
Electronics Engineering	Dr. Laxmi Shrivastava	Associate Professor	Ph.D	[SCOPUS:-20] [WOS:-14] [PEER:-103]	131400-217100
Humanities	Dr. Sanjeev Khanna	Associate Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-12]	131400-217100
Architecture & Planning	Dr. Anjali Shelke Patil	Associate Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-28]	131400-217100
Electrical Engineering	Dr. Shishir Dixit	Associate Professor	Ph.D	[SCOPUS:-5] [WOS:-4] [PEER:-21]	131400-217100
MAC	Mr. Prabhakar Sharma	Assistant Professor	B.E.	[SCOPUS:-1] [WOS:-1] [PEER:-8]	131400-217100
Mechanical Engineering	Mr. Rajendra Prasad Kori	Assistant Professor	M.Tech	[SCOPUS:-2] [WOS:-0] [PEER:-1]	79800-211500
Electrical Engineering	Mr. Rakesh Narvey	Assistant Professor	M.E.	[SCOPUS:-2] [WOS:-0] [PEER:-15]	68900-205500
MAC	Dr. Jitendra Kumar	Assistant Professor	Ph.D	[SCOPUS:-00] [WOS:-00] [PEER:-8]	79800-211500

MAC	Mr. Angad Singh Ojha	Assistant Professor	M.Sc.	[SCOPUS:-00] [WOS:-00] [PEER:-03]	68900-205500
Applied Science	Dr. Anjula Gaur	Assistant Professor	Ph.D	[SCOPUS:-0] [WOS:-0] [PEER:-11]	68900-205500
Electrical Engineering	Dr. Himmat Singh Ahirwar	Assistant Professor	Ph.D	[SCOPUS:-5] [WOS:-3] [PEER:-18]	68900-205500
Computer Science & Engineering	Mrs. Khushboo Agarwal	Assistant Professor	M.Tech	[SCOPUS:-4] [WOS:-0] [PEER:-7]	68900-205500
Electronics Engineering	Dr. Ravindra Pratap Narwaria	Assistant Professor	Ph.D	[SCOPUS:-4] [WOS:-1] [PEER:-35]	68900-205500
Applied Science	Dr. Sunita Sharma	Assistant Professor	Ph.D	[SCOPUS:-10] [WOS:-2] [PEER:-2]	79800-211500
Electrical Engineering	Dr. Vijay Bhuria	Assistant Professor	Ph.D	[SCOPUS:-3] [WOS:-1] [PEER:-0]	68900-205500
Information Technology	Dr. Punit Johri	Assistant Professor	Ph.D	[SCOPUS:-5] [WOS:-5] [PEER:-21]	68900-205500
Information Technology	Dr. Sanjiv Sharma	Assistant Professor	Ph.D	[SCOPUS:-21] [WOS:-5] [PEER:-27]	68900-205500
Information Technology	Mr. Vikas Sejwar	Assistant Professor	M.Tech	[SCOPUS:-07] [WOS:-07] [PEER:-20]	68900-205500
Information Technology	Mr. Abhilash Sonker	Assistant Professor	M.Tech	[SCOPUS:-6 ] [WOS:-2] [PEER:-0]	68900-205500
Computer Science & Engineering	Mrs. Jaimala Jha	Assistant Professor	M.Tech	[SCOPUS:-3] [WOS:-1] [PEER:-10]	68900-205500
Civil Engineering	Mr. Gautam Bhadauria	Assistant Professor	M.E.	[SCOPUS:-1] [WOS:-0] [PEER:-23]	68900-205500
Electrical Engineering	Mr. Kuldeep K.Swarnkar	Assistant Professor	M.E.	[SCOPUS:-3] [WOS:-0] [PEER:-22]	68900-205500
Mechanical Engineering	Mr. Vedansh Chaturvedi	Assistant Professor	M.Tech	[SCOPUS:-5] [WOS:-4] [PEER:-2]	68900-205500
Mechanical Engineering	Dr. Jyoti Vimal	Assistant Professor	Ph.D	[SCOPUS:-5] [WOS:-2] [PEER:-2]	68900-205500
Electrical Engineering	Mr. Praveen Bansal	Assistant Professor	Ph.D.#	[SCOPUS:-4] [WOS:-4] [PEER:-0]	68900-205500

Electronics Engineering	Dr. Karuna Markam	Assistant Professor	Ph.D.	[SCOPUS:-1] [WOS:-0] [PEER:-50]	68900-205500
Electronics Engineering	Mr. Madhav Singh	Assistant Professor	M.Tech	[SCOPUS:-3] [WOS:-0] [PEER:-25]	68900-205500
Mechanical Engineering	Mr. Sharad Agarwal	Assistant Professor	M.Tech	[SCOPUS:-4] [WOS:-3] [PEER:-0]	68900-205500
MCA	Dr. Parul Saxena	Assistant Professor	Ph.D.	[SCOPUS:-1] [WOS:-0] [PEER:-3]	68900-205500
Mechanical Engineering	Mr. Vaibhav Shivhare	Assistant Professor	M.Tech	[SCOPUS:-2] [WOS:-0] [PEER:-8]	68900-205500
Information Technology	Mr. Rajeev Kumar Singh	Assistant Professor	M.Tech	[SCOPUS:-16] [WOS:-5] [PEER:-0]	68900-205500
Information Technology	Ms. Neha Bharadwaj	Assistant Professor	M.E.	[SCOPUS:-4] [WOS:-1] [PEER:-15]	68900-205500
Electronics Engineering	Ms. Pooja Sahoo	Assistant Professor	M.E.	[SCOPUS:-0] [WOS:-0] [PEER:-15]	57700-182400
Electrical Engineering	Mr. Vishal Chaudhary	Assistant Professor	M.E.	[SCOPUS:-3] [WOS:-2] [PEER:-0]	57700-182400
Chemical	Ms. Swati Gupta	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-6]	57700-182400
Computer Science & Engineering	Mr. Mahesh Parmar	Assistant Professor	M.E.	[SCOPUS:-8] [WOS:-2] [PEER:-8]	57700-182400
Electronics Engineering	Mr. Deep Kishore Parsediya	Assistant Professor	M.Tech	[SCOPUS:-1] [WOS:-1] [PEER:-5]	57700-182400
Mechanical Engineering	Dr. Amit Aherwar	Assistant Professor	Ph.D.	[SCOPUS:-28] [WOS:-24] [PEER:-0]	57700-182400
Computer Science & Engineering	Dr. Rajni Ranjan Singh Makwana	Assistant Professor	Ph.D.	[SCOPUS:-9] [WOS:-1] [PEER:-15]	57700-182400
Chemical	Mr. Anish P. Jacob	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-1] [PEER:-3]	57700-182400
Computer Science & Engineering	Mr. Amit Kumar Manjhar	Assistant Professor	M.Tech	[SCOPUS:-7] [WOS:-3] [PEER:-20]	57700-182400
Mechanical Engineering	Mr. Bhupendra Kumar Pandey	Assistant Professor	M.Tech	[SCOPUS:-3] [WOS:-0] [PEER:-0]	57700-182400

Civil Engineering	Mr. Aditya Kumar Agarwal	Assistant Professor	M.Tech	[SCOPUS:-0] [WOS:-0] [PEER:-19]	57700-182400
Electrical Engineering	Dr. Vikram	Assistant Professor	Ph.D.	[SCOPUS:-1] [WOS:-2] [PEER:-1]	57700-182400
Electronics Engineering	Dr. Vikas Mahor	Assistant Professor	Ph.D.	[SCOPUS:-18] [WOS:-14] [PEER:-3]	57700-182400
Information Technology	Dr. Saumil Maheshwari	Assistant Professor	Ph.D.	[SCOPUS:-15] [WOS:-8] [PEER:-5]	57700-182400
Chemical	Dr. Shourabh Singh Raghuwanshi	Assistant Professor	Ph.D.	[SCOPUS:-4] [WOS:-3] [PEER:-2]	57700-182400
Management (MBA)	Dr. Trilok Pratap Singh	Assistant Professor	Ph.D.	[SCOPUS:-9] [WOS:-4] [PEER:-10]	57700-182400
Management (MBA)	Dr. Monica Chauhan Bhadoriya	Assistant Professor	Ph.D.	[SCOPUS:-1] [WOS:-0] [PEER:-4]	57700-182400
Electronics Engineering	Dr. Rahul Dubey	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-8] [PEER:-0]	57700-182400
Mechanical Engineering	Dr. Surendra Kumar Chourasiya	Assistant Professor	Ph.D.	[SCOPUS:-8] [WOS:-7] [PEER:-3]	57700-182400
Mechanical Engineering	Dr. Nitin Upadhyay	Assistant Professor	Ph.D.	[SCOPUS:-7] [WOS:-8] [PEER:-2]	57700-182400
Civil Engineering	Dr. Hemant Shrivastava	Assistant Professor	Ph.D.	[SCOPUS:-2] [WOS:-0] [PEER:-0]	57700-182400
Civil Engineering	Dr. Prachi Singh	Assistant Professor	Ph.D.	[SCOPUS:-5] [WOS:-0] [PEER:-3]	57700-182400
Electronics Engineering	Dr. Hemant Choubey	Assistant Professor	Ph.D.	[SCOPUS:-7] [WOS:-4] [PEER:-4]	57700-182400
Electronics Engineering	Dr. Deepak Batham	Assistant Professor	Ph.D.	[SCOPUS:-11] [WOS:-7] [PEER:-13]	57700-182400
Mechanical Engineering	Dr. Dinesh Kumar Rathore	Assistant Professor	Ph.D.	[SCOPUS:-32] [WOS:-30] [PEER:-0]	57700-182400

8. Justification as to how the Courses are devoted to study and research in unique and emerging areas of knowledge not being pursued by existing institutions.:

Justification as to how the Courses are devoted to study and research in unique and emerging areas of knowledge not being pursued by existing institutions.

During the last six years the institute has brought in major changes in the scheme and structure of the Under graduate and post graduate programmes, and developed a unique model with some ideas taken from the AICTE model curriculum guidelines and National Education Policy-2020.

These changes were successfully implemented, brought to practice and the learning experience of the students was quite enhanced in multiple ways mentioned below.

The institute also adopted a dynamic approach, continuously learning from experience and addressing all the issues that were reported by the stakeholder, to finally arrive at an exclusive and robust system with well-defined procedures, norms and guidelines for all the novel provisions introduced since 2017-2018.

This model with its myriad provisions has not been adopted in any other institute in the region.

The following courses and provisions are being offered towards study and research in emerging areas of knowledge:

#### COURSES & PROVISIONS

1. 'Python Programming' course for first year students of all UG programmes
2. 'Data Science' course for III semester students of all UG programmes
3. 'Artificial Intelligence and Machine Learning' course for IV semester students of all UG programmes
4. Four departmental elective courses, out of which three are offered from a pool of emerging area courses from NPTEL-MOOCs with credit transfer provision. (Against these 3 courses a large bucket of latest MOOCs is offered for the students)
5. Four open elective courses, out of which one from NPTEL-MOOCs offered from a pool of a large number of emerging area courses, with credit transfer provision.
6. Two open category courses from MOOCs are offered to the post graduate students with credit transfer provision. (schemes enclosed for point no 1-5)
7. Forty-two multidisciplinary modules are offered for 'In-house Summer Internship Project' of 60-hour duration, of 02 credits. A student can choose any one module.
8. 'Internship at industry' option for full VIII semester duration to familiarise student with latest practices being followed in industry
9. Project option for full VIII semester duration for students having research orientation; trained to work on software tools/practical problems; to write, present and publish research papers or work in start-up cell
10. 'Skill based mini project' has 20% weightage in all lab courses to develop a research mind set and problem solving skills in students.
11. 'Research internship' option under institute faculty is also provided for full VIII semester duration. (Students can choose any one option from 6, 7 or 8)
12. One full year dissertation for post graduate students, giving them greater opportunities for state-of-the-art research with mandatory paper publication or presentation.
13. Presently 78 activity based elective courses covering latest areas are offered under 'novel engaging course' category. (List enclosed)
14. Option for getting B.Tech degree with minor specialization in any branch of engineering by earning additional twenty credits.
15. Option for getting B.Tech degree with Honours in parent discipline by earning additional twenty credits.

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**9. Whether syllabi of the Courses and Research Programmes to be conducted in the emerging areas of knowledge have been prepared?:**

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Whether syllabi of the Courses and Research Programmes to be conducted / Proposed to be conducted in the emerging areas of knowledge have been prepared?

— There are already about 100+ Ph.D. scholars registered in the institute under various schemes including NDF, QIP, institute research fellowship etc.

— Their course work is also being conducted in the institute as per UGC guidelines.

The institute offers Ph.D. programmes in 08 engineering and technology departments, which are Civil, Mechanical, Electrical, Electronics, Computer Science & Information Technology, Chemical Engineering, Mathematics & Computing and Architecture.

— The department monitors and the institute IQAC reviews the six monthly progress of the scholars. Records of student performance are maintained by the Ph.D. section.

— Each scholar has a 'Research Advisory Committee' constituting of the supervisor(s), HoD, and two nominated members, one from the same department and one from another department.

— There are about 65 faculty members who are eligible/approved as Ph.D. supervisors.

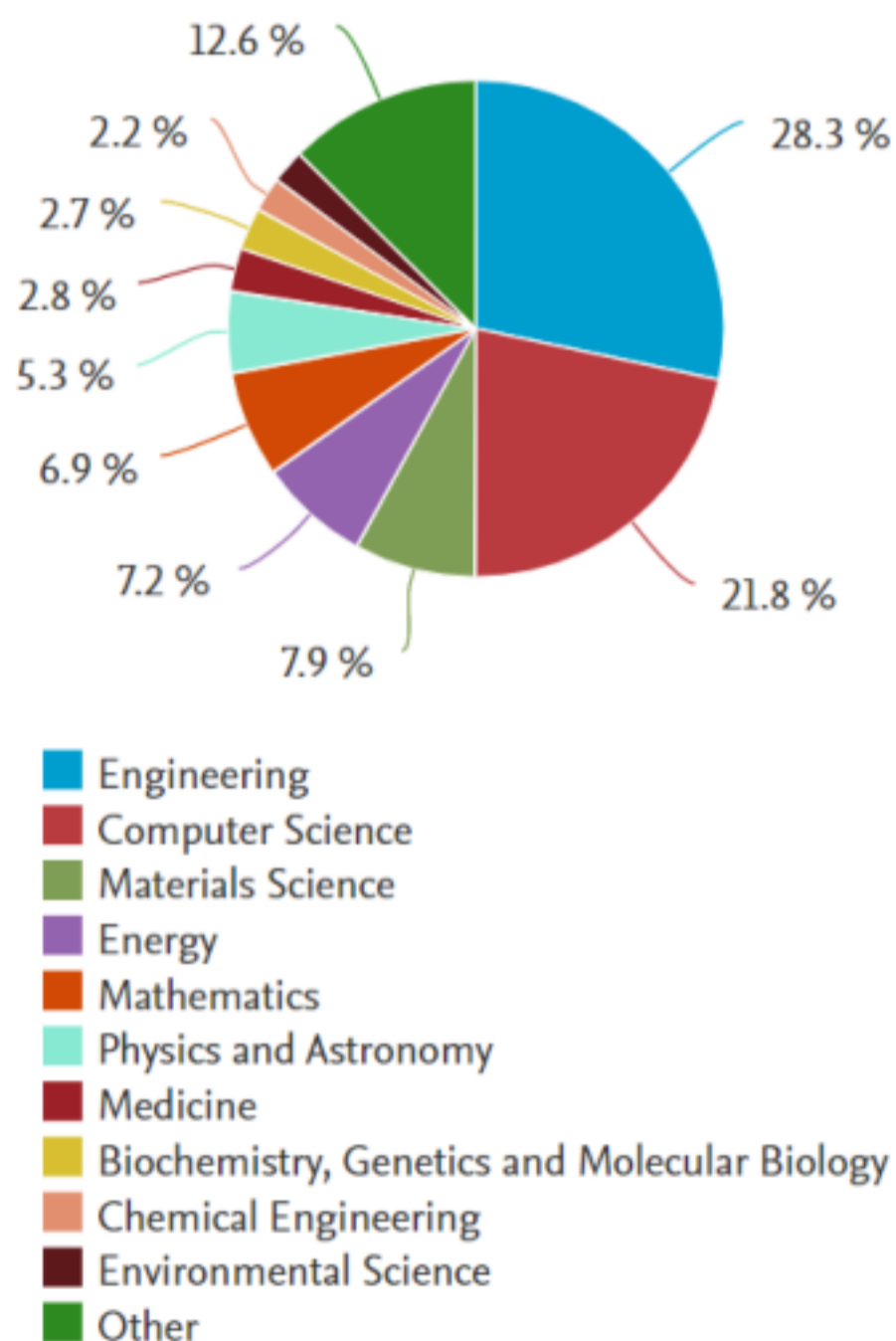
— Large number of areas with about 150+ sub-domains have been identified for research and in many areas cutting edge research is ongoing.

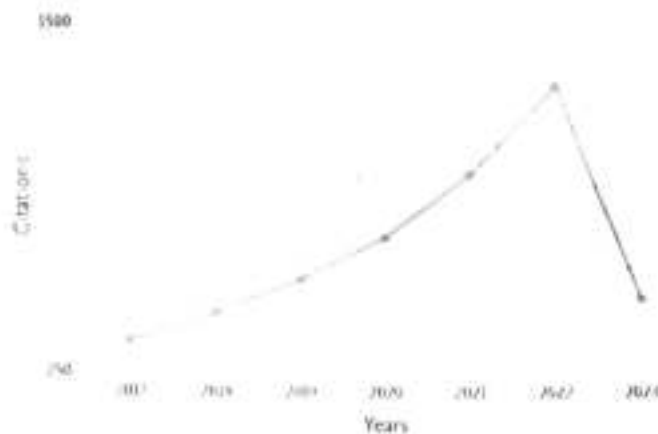
— The SCOPUS H-index of the institute is 37. There are 841 documents to the institute's credit in the 10+ disciplines shown in the figure below.

— If a university status is granted to the institute, with increased visibility and status, the institute research will further enhance.

— Sample syllabi of the courses of various research programmes is enclosed.

## Madhav Institute of Technology and Science




Date range: 2017 to 2023  Exclude self citations of all authors  Exclude citations from books **Update**[View Document](#)

## 10. Other Details:

- ii. Undertaking to the effect that the Institution(s) shall revise its MoA/Rules as per the existing UGC Regulations before issuance of Notification by this Ministry. [View Document](#)
- iii. Undertaking to the effect that the Institution(s) is a not-for-profit organization and shall not be engaged in commercialization of higher education. [View Document](#)
- iv. Undertaking to the effect that after declaration of the Institution as Deemed to be University, it shall not use the word 'University' suffixed to its name but may mention the words "deemed to be university" within parenthesis suffixed thereto. [View Document](#)

**Declaration:** I hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and Copies of documents uploaded on the Commission's web portal shall also be publicly disclosed on the website of the institution, duly certified by the Head of the institution. Any information found to be false after due verification shall be liable for criminal prosecution under the Indian Penal Code, 1860, as amended from time to time.

Name: **Dr. R. K. PANDIT**Sign:   
10.5.23

Official Seal :

**DIRECTOR**Madhav Institute of Technology & Science  
GWALIOR (M.P.)-474005