

Madhav Institute of Technology and Science, Gole ka Mandir, P.O. Residency, Gwalior-474005 [ARI-C-36239][C-36239]

Section 1: Policy And Institutionalization Of I&E Activities In HEIs (Academic Calendar Year 2020-21 & 2021-22)

1.1) Adoption Level of Innovation and Entrepreneurship (I&E) Policy in HEIs: Registration; Policy Formulation; Policy Implementation

Completion of Action Items (status as on 7th November 2022)	Status
Registered in the NISP portal for I&E Policy Adoption	Yes
Institute has Formulated an Innovation and Entrepreneurship (I&E) Policy	No
Institute has Action Plans for Implementation of the I&E Policy	No

Contact:

Faculty Name:	Dr. C. S. Malvi
Designation:	Professor
Email ID:	csmalvi@mitsgwalior.in
Mobile No.	9993207600

1.2) Performance Level of Institution's Innovation Councils (IICs) Established in HEIs: Scores and Stars Obtained

Annual Performances of IIC Institute	Stars Secured
IIC 1.0 (2018-19)	1,2
IIC 2.0 (2019-20)	1
IIC 3.0 (2020-21)	0
IIC 4.0 (2021-22)	1

Contact:

IIC President of the Institute:	Dr. C S Malvi
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Designation:	Dean Academics
Email ID:	csmalvi@mitsgwalior.in
Mobile No.	9993207600

1.3) Activeness of Trained Innovation Ambassadors in Driving Campus I&E Ecosystems in HEIs: Trained IA/HEI and Nos of Prescribed Activities undertaken by IA

Sr. No.	Name of the Faculty IA	Level of Training	No of I&E Expert Talks/Sessions Conducted
1	Punit Kumar Johari	Advance	0

1.4) Participation in KAPILA/SIH Program

HEI Registered in the KAPILA Portal	C-36239	Yes
HEI Participated in the Smart India Hackathon (2022)	C-36239	Yes

Section 2: Teaching and Learning: Academic Programs related to Innovation and Entrepreneurship (I&E) Offered by the HEI

2.1) Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Course Start Date
1	Intellectual Property Rights	100008	2020-21	Core Course	Bachelor	Civil Engineering	2	15-07-2020 00:00:00
2	Intellectual Property Rights	100008	2021-22	Core Course	Bachelor	Civil Engineering	2	19-07-2021 00:00:00

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Course Start Date
3	Intellectual Property Right	100008	2021-22	Core Course	Bachelor	Information Technology	2	19-07-2021 00:00:00
4	Intellectual Property Right	100008	2020-21	Core Course	Bachelor	Information Technology	2	15-07-2020 00:00:00
5	Ethics Economics Entrepreneurship	100005	2021-22	Core Course	Bachelor	Information Technology	2	19-07-2021 00:00:00
6	Ethics Economics Entrepreneurship	100005	2021-22	Core Course	Bachelor	Information Technology	2	15-07-2020 00:00:00
7	Innovation From Creativity to Entrepreneurship	2000155	2021-22	Core Course	Bachelor	Electrical Engineering	1	01-08-2022 00:00:00
8	Entrepreneurship Concept to Company	2000151	2021-22	Core Course	Bachelor	Electronics and Communication Department	1	02-08-2021 00:00:00
9	Intellectual Property Right	100008	2021-22	Core Course	Bachelor	Electrical Engineering	2	02-08-2021 00:00:00
10	IPR	100008	2020-21	Core Course	Bachelor	Mechanical Engineering	2	08-06-2020 00:00:00
11	IPR	100008	2021-22	Core Course	Bachelor	Mechanical Engineering	2	05-07-2021 00:00:00
12	INTELLECTUAL PROPERTY RIGHTS	210707	2020-21	Core Course	Bachelor	Architecture and Planning	3	13-07-2020 00:00:00

2.2) Non-Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Program Start Date
1	AICTE Sponsored One Week STC on Applications of Image Processing Computer Vision and Intelligent Technologies in Pandemic	2021-22	Short-term Certificate Program	Central Govt. Agency	Computer Science and Engineering	18-10-2021 00:00:00
2	AICTE Sponsored One week Online Short Term Training Programme on Applied Computing	2020-21	Short-term Certificate Program	Central Govt. Agency	Computer Science and Engineering	09-11-2020 00:00:00
3	INTELLECTUAL PROPERTY RIGHTS IN ARCHITECTURE INTRODUCTION	2021-22	Faculty Development Program (FDP)	Central Govt. Agency	Department of Architecture and Planning	09-08-2021 00:00:00

Section 3: Pre-Incubation and Incubation Infrastructure & Facilities are Currently in Operation to Promote I&E Agenda (AY 2020-21 & 2021-22)

3.1) Existence of Pre-Incubation Facility (Tinkering Lab/Makers' Space/Design Centre/New Gen IEDC/IEDC/EDC/Innovation Cell/Startup Cell) (>= 600 Sq. Ft. Floor Area)

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	Start-Up Cell	Start-up Cell	Prof. Ankit Tiwari	9826375215	ankittiwariitb@gmail.com	Mentoring Support,Seed Grant Support,Pre-Incubation Facility Support (Idea to Prototype and Innovative Business Plan Development),Incubation Facility Support (Innovative Business Model to Startup and Market Linkage & Growth Stage),Investment - Angel a

3.2) Existence of Incubation Facility (>= 1500 Sq. Ft. Floor Area)

Sr. No.	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	Entrepreneurship Cell	Dr. Prabhakar Bhadauria	9425121133	prabhakar_bhadouria@gmail.com	DST/NSTEDB/NIDHI
2	Entrepreneurship Cell	Dr. Prabhakar Bhadauria	9425121133	prabhakar_bhadouria@gmail.com	DST/NSTEDB/NIDHI

3.3) Existence of IPR Cell / Patent Facilitation Unit / Technology Transfer Centre at the institute

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	Technology Transfer Centre /TTO	Innovation, Incubation & Start-up Cell	Prof. Ankit Tiwari	9826375215	ankittiwariitb@gmail.com	Mentoring Support,Se Grant Support,Pre-Incubation Facility Support (Idea to Prototype and Innovat Business Plan Development),Incubat Facility Support (Innovative Business Model to Startup and Market Linkage & Growth Stage),Investment - Angel a

Section 4: Generation and Support of Prototypes / Innovations at HEI and Recognition received (AY 2020-21 & 2021-22)

4) Total no. of Innovations (Verified and Recommended) in Different TRLs (4-9) are Recorded in the YUKTI National Innovation Repository of the IIC Institute (Status as on 7th November 2022)

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020-21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engagement of Team Lead in Institute	Contact No	Email
No Data Found								

Section 5: Start-ups/Ventures Established and Supported at HEI and & Recognitions Received (AY 2020-21 & 2021-22)

5) Total no of Ventures/Startups (Verified and Recommended) are Recorded in the YUKTI National Innovation Repository of the IIC Institute (Status as on 7th November 2022)

Sr. No.	Startup/Venture Name	Startup/Venture Registered as	CIN No/LLP/OPC/RC No	GST No	FY of Establishment	Startup/Venture Recognized by DPIIT/Startup India
No Data Found						

Section 6: Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

6) Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
1	GitHub	Corporate/Industry Association	1 YR	Active	03-12-2021	
2	Dhiyotech Private Limited	Corporate/Industry Association	1 YR	Active	18-04-2022	
3	Regional Reference Standard Laboratory, Ahmedabad	Govt. Agency (Central)	3 Yr	Active	24-03-2022	

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
4	M/s Maa sharda Structures Suppliers Pvt Ltd	Non Govt. Agency	6 Yr	Active	19-07-2020	View (/Uploads
5	National Power Training Institute (NPTI)	Govt. Agency (Central)	3 Yr	Active	29-11-2021	
6	Madhya Pradesh Poorv Kshetra Vidyath Vitaran Co Ltd The Central Training Institute Nayagaon Jabalpur	Govt. Agency (State)	3 Yr	Active	06-10-2021	
7	CodeChef	Corporate/Industry Association	1 YR	Active	05-01-2022	
8	KailTech Test and Research Center	Corporate/Industry Association	1 YR	Active	12-08-2021	

Section 7: Intellectually Property (IP) Generated and Commercialization

7.1) IPR Filed and Published (Copyrights & Design only)

Sr. No.	Title/Name of IP (Copyright/Design Only)	Type of IP	IP Registration Number of Copyright/Design	Date of Filed/Published	Has this IP(Copyright & Designs Only) been Commercialized/Transferred to Industry/Startup/Society?
1	Funeral Pyre Based on Heat Recovery System	Design	337209-001	05-01-2021	No
2	Testing Device for Checking Purity and Nutritional Content of Milk Product	Design	332119-001	18-08-2020	No

7.2) Patents Filed by HEI

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
1	DYNAMIC DIGITAL TWIN SYSTEM AND A METHOD OF OPERATING THEREOF	2020103853	02-12-2020
2	FUZZY LOGIC-BASED QUERY EXPANSION METHOD FOR EFFICIENT INFORMATION RETRIEVAL USING RELEVANCE FEEDBACK APPROACH	2021101672	31-03-2021
3	Smart Necklace and Wrist Band with Machine Learning Based Image Processing and GPS	202121057311	12-09-2021
4	System And Method For Monitoring Health Of Home Isolated Patient And Automatically Demanding Health Resources Using Artificial Intelligence	2021104518	07-04-2021
5	A System For Multilingo Abomination Detection Using Machine Learning	202211002260	31-01-2022
6	A System For Detection Of Conceptual Level Plagiarism And Correctness Of File Formatting Using Machine Learning	202211005251	31-01-2022
7	Block Chain Based Integrated Forecast, Demand and Supply Chain Management System for Marketplace with the Approach of Machine Learning	2021101251	10-03-2021
8	Method and System for Automatically Monitoring the Growth of Plants	202121026088	11-06-2021
9	A Centralized Crime Reporting and Management System	202121026244	12-06-2021

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
10	System and Method to Transport Products Over a Network	202121026132	11-06-2021
11	System and Method for Criminal Detection and Recognition	202011044583	13-10-2020
12	Method and System for Automatically Identifying a Blood Donor in Vicinity of a Patient	202121053094	18-11-2021
13	System and Method for Secured Irrigation, Application	2021106933	24-08-2021
14	An AI Based System to Detect Person and Their Activity in Low Illuminated Space and Method Thereof	202221006680	08-02-2022
15	Cup	358114-001	08-02-2022
16	Microbial Fuel Cell Based on Plants for Electricity Generation	344797-001	16-06-2021
17	A system and method for monitoring agricultural crops based on IOT and deep learning models and providing crop disease resolution using the same	202121010953	15-03-2021
18	A method for adaptive communication between different smart IOT devices in 5G communication platform	202111003754	28-01-2021
19	Smart Necklace and Wrist band with machine learning based Image Processing and GPS	202121057311	12-09-2021
20	System for maintenance and monitoring of fire extinguisher for refilling using IOT and image processing tools	2021106437	22-10-2021
21	An Intelligent Electric Moving Machine (IEMM) Embedded System	202011057348	30-12-2020
22	Method and Apparatus for Measuring the Absorptivity of Materials Having Different Contour Surfaces	202131052394	15-11-2021
23	Cognitive Computing Based Robot for Active Education Using Artificial Intelligence	202111053730	22-11-2021

7.3) Patent Published / Granted Data

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
1	2020103853	DYNAMIC DIGITAL TWIN SYSTEM AND A METHOD OF OPERATING THEREOF	02-12-2020	Granted	2021	Other(Individu:
2	2021101672	FUZZY LOGIC-BASED QUERY EXPANSION METHOD FOR EFFICIENT INFORMATION RETRIEVAL USING RELEVANCE FEEDBACK APPROACH	31-03-2021	Granted	2021	Other(Individu:
3	202121057311	Smart Necklace and Wrist Band with Machine Learning Based Image Processing and GPS	19-12-2021	Published	2021	Other(Individu:
4	2021104518	System And Method For Monitoring Health Of Home Isolated Patient And Automatically Demanding Health Resources Using Artificial Intelligence	24-04-2021	Granted	2022	Other(Individu:
5	202121044433.00	A miniature F-shaped printed asymmetric coplanar strip fed dual band antenna for 5GLTE, WLAN & WIMAX applications	30-09-2021	Published	2021	Applicant
6	2021106437	System for maintenance and monitoring of fire extinguisher for refilling using internet of things (iot) sensors and image processing tools	02-09-2021	Granted	2021	Co-Applicant

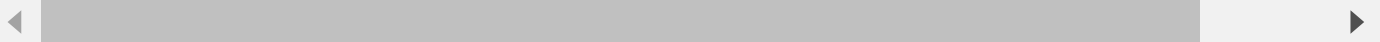
Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
7	2020103463	Design of Hexagonal shaped Hybrid Fractal Quad Band Antenna for Wireless Application	16-11-2020	Granted	2020	Co-Applicant
8	202141057895	A SMART IOT BASED AIR COOLER SYSTEM WITH TOUCH SCREEN DISPLAY UNIT	13-12-2021	Published	2021	Co-Applicant
9	202211054385 A	DESIGNING A BLOCKCHAIN BASED FRAMEWORK FOR ANALYSING THE SECURITY AND PRIVACY OF IOT FOR FUTURE ENHANCEMENT OF SOURCE LOCATION	22-09-2022	Published	2022	Co-Applicant
10	201921017792	A MOBILE PHONE CHARGER WITH FLEXIBLE MOBILE PHONE STAND	03-05-2019	Granted	2021	Applicant
11	202011057348 A	AN INTELLIGENT ELECTRIC MOVING MACHINE (IEMM) EMBEDDED SYSTEM	31-12-2020	Published	2021	Other(Individual)
12	337209-001	Funeral Pyre Based on Heat Recovery System	05-01-2021	Granted	2021	Applicant
13	332119-001	Testing Device for Checking Purity and Nutritional Content of Milk Product	18-08-2020	Granted	2021	Applicant

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
14	2021101251	Block Chain Based Integrated Forecast, Demand and Supply Chain Management System for Marketplace with the Approach of Machine Learning (Australian Patent in Intellectual Property, Australian Government)	03-10-2021	Granted	2021	Applicant
15	202121026088	Method and System for Automatically Monitoring the Growth of Plants	06-11-2021	Published	2021	Applicant
16	202121026244	A Centralized Crime Reporting and Management System	06-12-2021	Published	2021	Applicant
17	202121026132	System and Method to Transport Products Over a Network	06-11-2021	Published	2021	Applicant
18	202011044583	System and Method for Criminal Detection and Recognition	13-10-2020	Published	2021	Applicant
19	202121053094	Method And System for Automatically Identifying a Blood Donor in Vicinity of a Patient	18-11-2021	Published	2021	Applicant
20	2021106933	System and Method for Secured Irrigation, Application(Australian Patent in Intellectual Property, Australian Government)	24-08-2021	Granted	2021	Applicant
21	202221006680	An AI Based System to Detect Person and Their Activity in Low Illuminated Space and Method Thereof	08-02-2022	Published	2022	Applicant

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as
22	358114-001	Cup	08-02-2022	Published	2022	Applicant
23	344797-001	Microbial Fuel Cell Based on Plants for Electricity Generation	16-06-2021	Published	2022	Applicant
24	2021105601	EMOTIONAL INTELLIGENCE BASED HR APPRAISAL SYSTEM	11-03-2021	Granted	2021	Co-Applicant
25	2021106399	DEEP LEARNING BASED INTUITIVE COGNIZANCE FOR SOCIALIZATION PROCESS	11-03-2021	Granted	2021	Co-Applicant

7.4) IP Commercialized and Transferred to Industry/Startup

Sr. No.	Name of Technology Licenced/Transferred/Commercialized	Technology Type	Patent/Licence Holder name (Institute Co-ownership is Must)	Technology Transferred to	Name of Licensee	D T T
No Data Found						



Declaration

To,
The ARIIA Committee
MHRD's Innovation Cell
New Delhi

Joint Declaration by the Head of the Institute and Nodal Officer

Dear Sir,

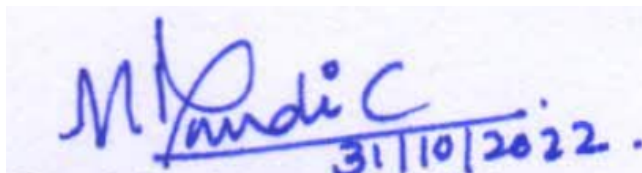
Herewith, myself **Dr. R. K. Pandit** (Head of Institute) and **Mr. Manjaree Pandit** (Nodal Officer) jointly declaring on behalf of our institute is that all the information submitted are true and correct to best of our knowledge.

Thank you

The Head of Institute



Nodal officer



Mr. Manjaree Pandit,
Nodal Officer,
Madhav Institute of Technology and Science, Gole
ka Mandir, P.O. Residency, Gwalior-474005,
Gwalior, Madhya Pradesh

Dr. R. K. Pandit,
Head of the Institution,
Madhav Institute of Technology and Science, Gole
ka Mandir, P.O. Residency, Gwalior-474005,
Gwalior, Madhya Pradesh