

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	Yes
Institute has Action Plans for Implementation of the I&E Policy	Yes

Contact:

Faculty Name:	Dr. Shilpa Pankaj Kewate
Designation:	Associate Professor
Email ID:	shilpakewate@mes.ac.in
Mobile No.	9960591296

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)	
IIC 2.0 (2019-20)	
IIC 3.0 (2020-21)	2
IIC 4.0 (2021-22)	3.5

Contact:

IIC President of the Institute:	Dr.R.C. Prasad
Designation:	Professor
Email ID:	rcprasad@mes.ac.in
Mobile No.	9869236812

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	Dr. Gajendra V. Patil	Basic	0
2	Dr. Ashok Kanthe	Basic	0
3	Dr. Mansi Subhedar	Advance	2
4	Mr. Raju Narwade	Advance	0
5	Dr. M.D. Nadar	Basic	0
6	Dr. Divya Chirayil	Basic	0
7	Dr.Karthik Nagarajan	Basic	37
8	Ms. Munawira Kotyad Pillai	Basic	0
9	Dr.R.C. Prasad	Basic	0
10	Dr. J.W. Bakal	Basic	0
11	Dr. B.K. Sarkar	Advance	0
12	Dr. G. R. Patil	Advance	1
13	Dr. Manvendra Vashistha	Basic	0
14	Dr. Shilpa Kewate	Basic	0
15	DR JAGDISH WASUDEORAO BAKAL	Advance	0

1.4) Participation in KAPILA/SIH Program

HEI Registered in the KAPILA Portal	C-34105	Yes
HEI Participated in the Smart India Hackathon (2022)	C-34105	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	Course End Date	Total Duration of the Course (in Days)
No Data Found										

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	Program End Date
1	Summer internship and mentorship for industry connect	2021-22	Short-term Certificate Program	Industry/Non-Govt.	Mechanical Engineering	01-06-2022 00:00:00	30-06-2022 00:00:00

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	Program End Date
2	Challenges and opportunities in sustainable energy conservation	2021-22	Short-term Certificate Program	Self Sponsored/Supported	Civil Mechanical Electrical Engineering	19-09-2022 00:00:00	24-09-2022 00:00:00
3	Emerging Technologies in Civil and Infrastructure Engineering for Sustainable Development	2021-22	Short-term Certificate Program	Central Govt. Agency	Civil Engineering	12-07-2021 00:00:00	17-07-2021 00:00:00
4	Insights of Data Science and Machine Learning with its Applications	2021-22	Short-term Certificate Program	Central Govt. Agency	Computer Engineering	04-07-2022 00:00:00	09-07-2022 00:00:00
5	Research Methodology and IPR	2020-21	Short-term Certificate Program	Self Sponsored/Supported	Computer Engineering	07-07-2021 00:00:00	11-07-2021 00:00:00
6	Composites Fracture Toughness NDE and Failure Analysis	2020-21	Short-term Certificate Program	Central Govt. Agency	Mechanical Engineering	18-01-2021 00:00:00	23-01-2021 00:00:00
7	Composites Fracture Toughness NDE and Failure Analysis	2020-21	Short-term Certificate Program	Central Govt. Agency	Mechanical Engineering	18-01-2021 00:00:00	23-01-2021 00:00:00

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	Program End Date
8	Composites Fracture Toughness NDE and Failure Analysis	2020-21	Short-term Certificate Program	Central Govt. Agency	Mechanical Engineering	15-03-2021 00:00:00	20-03-2021 00:00:00
9	Challenges Opportunities of Industry 4 Techniques Scope in Manufacturing	2021-22	Faculty Development Program (FDP)	Central Govt. Agency	Mechanical Engineering	19-09-2022 00:00:00	24-09-2022 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	Innovation Cell	Pillai HOC Innovation lab	Dr. M. D. Nadar	8652240002	mdnadar@mes.ac.in	Mentoring 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)

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	PHCET Research and Innovation centre	Dr. B. K. Sarkar	8830121996	dr.bksarkar@mes.ac.in	Own Resource

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	Pillai HOC research center	Dr. B. K. Sarkar	8830121996	dr.bksarkar@mes.ac.in	Mentoring 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)

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
1	Automatic Air Fill in Bike, Scooty and Car Tyres.	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 6 : Prototype system tested in intended environment close to expected performance	Dr. Gajendra Patil	Faculty

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
2	Development of hybrid Polymeric nanocomposite using glass, carbon and basalt fibers as reinforcing elements.	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Suhas	Faculty
3	Sustainable Sandwich Composite Circular Manhole Cover Designed for Pedestrian Networks	Academic Requirement/Study Project	2021-22	TRL 9 : Full commercial application, technology available for consumers	Dr. Shilpa Pankaj Kewate	Faculty

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	FY Sta Re SuJ fro Inc uni Ins
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	Bloomzen Pvt. Ltd.	Non Govt. Agency	3	Active	02-03-2022	View (/Uploads
2	Dhrendra Group of Company Infrastructure Pvt. Ltd.	Non Govt. Agency	3	Active	12-02-2020	View (/Uploads
3	Geh research	Non Govt. Agency	5	Active	04-10-2021	View (/Uploads

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	Indian Green Building Council	Knowledge/Mentoring Agency	2	Active	01-03-2022	View (/Uploads
5	RCF Ltd. India	Govt. Agency (Central)	3	Active	16-06-2022	View (/Uploads
6	S P CONCARE PVT. LTD.	Non Govt. Agency	5	Active	29-12-2020	View (/Uploads

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?
No Data Found					

7.2) Patents Filed by HEI

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
1	Dual triangular slope bottom tuned liquid damper for improving efficiency of flat bottom tuned liquid damper.	202221001645	12-01-2022
2	ONLINE TECHNICAL LEARNING AND ADVANCED TRAINING MANAGEMENT SYSTEM	202111050099	01-11-2021
3	SMART CONSTRUCTION SAFETY HELMET: AN ARDUINO-BASED RISK, SALARY MONITORING AND MANAGEMENT TOOL.	202121043251	23-09-2021

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
4	HEX-GRID WITH A COMBINATION OF CELLULAR LIGHTWEIGHT CONCRETE AND PAPERCRETE TO CONSTRUCT HIGH STRENGTH LIGHTWEIGHT PARTITION WALLS.	202121046794	10-10-2021
5	PRECAST PREFAB BAMBOO REINFORCED CEMENT CONCRETE COMPOUND WALL PANELS.	202121049746	29-10-2021
6	EXPERIMENTAL INVESTIGATION FOR HIGH STRENGTH AND DURABLE CONCRETE WITH ADDITION OF ADMIXTURES.	202121049747	29-10-2021
7	BLACK BOX FOR TWO WHEELERS	202121052899	17-11-2021
8	DEVELOPMENT OF NANOENGINEERED ABS-MWCNTS COMPOSITE USING FUSED DEPOSITION MODELING (FDM) 3D PRINTING INFILL PATTERNS	202221040861	17-07-2022
9	USE OF TEXTILE SLAG AND GRAPHITE IN ECOFRIENDLY PAVER BLOCK FOR SNOW AREAS	202221040862	18-07-2022
10	LED Dimming Driver Circuit Using PWM	202221010401	26-02-2022
11	Construction of paver blocks with Paint Sludge, Flay-ash, and GGBS as partial replacements of in concrete.	202221040864	18-07-2022
12	HOME BASED DIGITAL FM TRANSMISSION USING MACHINE LEARNING AND IOT BASED SYSTEM	202111051548	11-10-2021
13	METHOD AND PROCESS OF MANUFACTURE P-TILES USING WASTE PLASTIC AND OTHER REQUIRED MATERIAL	202121039462	31-08-2021
14	METHOD AND PROCESS OF MANUFACTURE P-TILES USING WASTE PLASTIC AND OTHER REQUIRED MATERIAL	202121039462	31-08-2021
15	MANHOLE COVER WITH BAMBOO AS SUSTAINABLE REINFORCEMENT IN LIGHT DUTY GRADE	202121043843	28-09-2021
16	GESTURE RECOGNITION GLOVE INTEGRATION WITH HOME ASSISTANT SYSTEMS FOR VERBALLY CHALLENGED PERSONS Transaction ID Payment Mode Challan Identification Number Amount Paid Head of A/C	202121044387	30-09-2021
17	ECO-FRIENDLY POLYPROPYLENE PAVER BLOCK WITH SWAPPABLE ANTI SKID FILM.	202121046356	11-10-2021
18	SUSTAINABLE SANDWICH COMPOSITE CIRCULAR MANHOLE COVER DESIGNED FOR PEDESTRIAN NETWORKS	202121052897	17-11-2021

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
19	STEEL FIBRE REINFORCED SUSTAINABLE COMPOSITE HOLLOW BRICK	202121053767	23-11-2021
20	MANUFACTURING OF LIGHTWEIGHT SANDWICH BRICKS USING A UNIQUE COMBINATION OF BAMBOO FIBER AND E-WASTE POWDER	202121054010	13-11-2021
21	AGRICULTURE WATER LEVEL CONTROLLING USING IOT-BASED TECHNOLOGY	202121054598	25-11-2021
22	STREETLIGHTS MONITORING USING MACHINE LEARNING AND IOT-BASED	202121054865	26-11-2021
23	"EXPERIMENTAL STUDIES ON THE USE OF WASTE RUBBER TYRE CRUMB AND BAMBOO IN TREMIX CONCRETE FLOORING"	202121056483	06-12-2021
24	SLOPE BOTTOM TUNED LIQUID DAMPER FOR IMPROVING PERFORMANCE OF FLAT BOTTOM TUNED LIQUID DAMPER	202121061528	29-12-2021
25	NEW SCRUBBER FOR CLEANING AND WASHING OF STAINLESS TIFFIN BOX AND UTENSILS/POT USED IN COOKER.	202121062299	31-12-2021
26	PAVER BLOCKS OF CONCRETE WITH RECYCLED AGGREGATES AND PARTIAL REPLACEMENT OF CEMENT WITH ALCCOFINE	202121062302	31-12-2021
27	SMART ECO-FRIENDLY E-WASTE DIVIDER BLOCK (SEED)	202221000049	01-01-2022
28	RECYCLED CONCRETE USING DEMOLITION WASTE WITH RICE HUSK AND COIR FIBRES FOR SUSTAINABILITY	202221021777	12-04-2022
29	MOBILE BASED APPLICATION FOR AUTOMATIC IRRIGATION, FERTIGATION AND NOTIFICATION	202221020211	04-04-2022

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	View
1	202221001645	Dual triangular slope bottom tuned liquid damper for improving efficiency of flat bottom tuned liquid damper.	12-01-2022	Published	2021		View (/Upl
2	202111050099	ONLINE TECHNICAL LEARNING AND ADVANCED TRAINING MANAGEMENT SYSTEM	01-11-2021	Published	2021		View (/Upl
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8	202221040861	DEVELOPMENT OF NANOENGINEERED ABS-MWCNTS COMPOSITE USING FUSED DEPOSITION MODELING (FDM) 3D PRINTING INFILL PATTERNS	17-07-2022	Published	2021		View (/Upl
9	202221040862	USE OF TEXTILE SLAG AND GRAPHITE IN ECOFRIENDLY PAVER BLOCK FOR SNOW AREAS	18-07-2022	Published	2021		View (/Upl
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14	202121039462	METHOD AND PROCESS OF MANUFACTURE P TILES USING WASTE PLASTIC AND OTHER REQUIRED MATERIAL	31-08-2021	Published	2021		View (/Upl
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22	202121054865	STREETLIGHTS MONITORING USING MACHINE LEARNING AND IOT-BASED	26-11-2021	Published	2021		View (/Upl
23	202121056483	"EXPERIMENTAL STUDIES ON THE USE OF WASTE RUBBER TYRE CRUMB AND BAMBOO IN TREMIX CONCRETE FLOORING"	06-12-2022	Published	2021		View (/Upl
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28	202221021777	RECYCLED CONCRETE USING DEMOLITION WASTE WITH RICE HUSK AND COIR FIBRES FOR SUSTAINABILITY	12-04-2022	Published	2021		View (/Upl
29	202221020211	MOBILE BASED APPLICATION FOR AUTOMATIC IRRIGATION, FERTIGATION AND NOTIFICATION	04-04-2022	Published	2021		View (/Upl

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	Date Tran: Tech
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No Data Found



Declaration

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

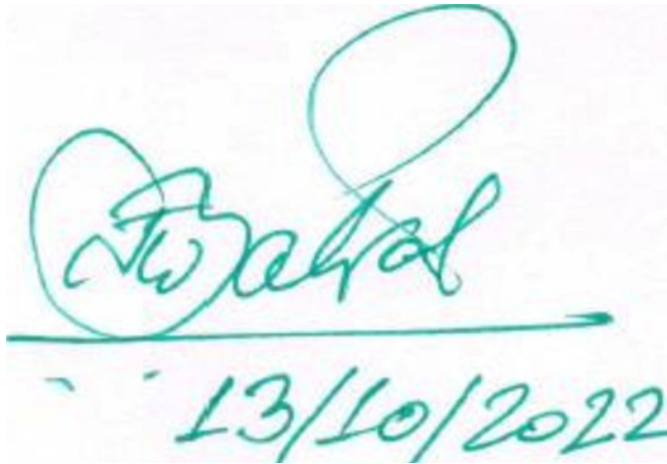
Joint Declaration by the Head of the Institute and Nodal Officer

Dear Sir,

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

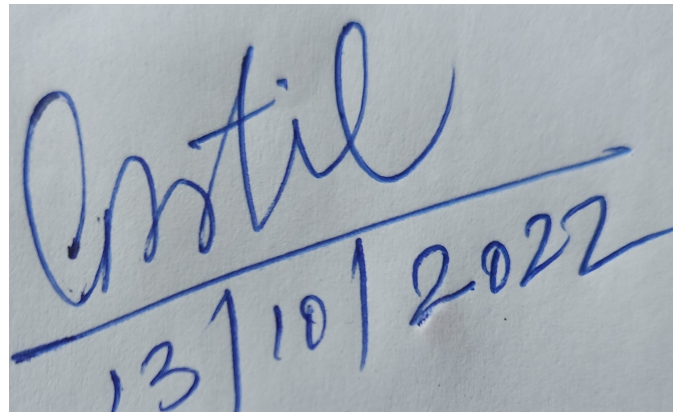
Thank you

The Head of Institute



Dr. J. W. Bakal,
Head of the Institution,
Pillai HOC College of Engineering and Technology,
Raigad, Maharashtra

Nodal officer



Mr. G. R. Patil,
Nodal Officer,
Pillai HOC College of Engineering and Technology,
Raigad, Maharashtra