

# **Centre of Science and Society**

Under

Institute of Interdisciplinary Studies (IIDS)



# University of Allahabad Prayagraj- 211002

#### 1. ABOUT-

#### Centre: Centre of Science and Society

With the approval of Academic Council vide Resolution No. 43/22dt.19.5.2015 and Executive Council Resolution No. 03/32 dt.2.6.15 and subsequent office Memorandum No. Comm. Sec./5243/2015 dt. 22.08.2015, the green signal was provided to start the M.Sc. IV semester CBCS based course in Rural Technology and Development under Institute of Inter Disciplinary Studies (IIDS) by the University of Allahabad with intake of 15 seats. The course was inaugurated by the Hon'ble Justice M. C. Tripathi of Allahabad High Court in 2015-16 and first batch has come out very successfully in 2017.

The University took lead to translate the PURA (Providing Urban Amminities in Ruraral Area) of Dr APJ Kalam and its execution by PM Modi's Sansad Adarsh Gram Yojana by adopting Ramapur Village of Bahadurpur block in Phulpur Tehsil of Allahabad District. In 1<sup>st</sup> phase chakzhaura Moja purely SC populated with high percentage of Females have been selected by the University for their Upliftment. Centre has again adopted five (05) Villages of Koraon Block, Allahabad as an initiative of Unnat Bharat Abhiyan and MHRD, New Delhi. Moreover the Centre has got the responsibility of Post project Evaluation study of Saansad Adarsh Gram Yojna of 104 of Uttar Pradesh.

In campus selection 18 interested candidates have been selected and well placed from two successful batch of 15 students each. It is also worth to mention that University of Allahabad has been identified as spoke partner of Design and Innovation Centre of IIT-BHU getting funds from MHRD. Further, the university approved the change of nomenclature from M.Sc. Rural Technology and Development to M.Sc. Design and Innovation in Rural Technology.

The centre is working towards the ideas for doubling India's Rural GDP, Facilitating affordable technology development appropriate to the rural context and Focusing on the sectors include Agriculture, Health, Finance, Education, Vocational Training, Business Processing technologies etc. for rural India. At Centre of Science and Society, we try and welcome innovative ways of agro based rural industries/Industrial technologies such as Vermicomposting, Biofertilizers, Candle making, Dairy activities, Mushroom cultivation, floriculture, paper bag making, medicinal plant cultivation, apiculture etc.

## 2. VISION-

#### VISION/OBJECTIVE

**ORIGIN**-To begin with a course dedicated towards overall development of rural technology, the Centre of Rural Technology and Development {M.Sc. (Four Semesters) Programme} under the Coordinator-ship/ Directorship (Honorarium basis) in Department of Botany, University of Allahabad, efforts will made to retrieve funds under **CSR** (Corporate- Social Responsibility) from Coal India, NTPC, IFFCO, and Private Industry *viz.*, Kirloskar, Mahindra Tractors, Monsanto etc. In addition to this, the Ministry of Rural Technology and Ministry of Small and Medium Scale Industries, Govt. will also render support in establishing an independent centre of Rural Technology and Development

which will incorporate advancement of technological and social aspect of rural development.

#### **OBJECTIVES AT A GLANCE**

- ➤ Assessment of rural area and people.
- Rural Entrepreneurships (self-employment through sericulture, lac farming, flower farming, mushroom culture, bee keeping, preparation of natural dyes, bio composting, E-waste management, Biofertilizers etc.).
- Safe and eco-friendly technologies promotion and their compatibility amongst villagers.
- > Conservation and promotion of indigenous knowledge.
- Socio-nutritional-economic development of indigenous peoples through appropriate integrated technology and awareness.
- > Generating awareness regarding government policies (monitoring and documentation).
- > Rural planning and implementation of rural development projects.
- > To develop skill in students to for aforementioned tasks.

#### 3. **Programmes of Study:**

(Courses Run by the Centre)

S. No.	Programme of	Duration	No. of Seats	Specialization(s)		
	Study					
1.	Ph.D.		06 in 2019	Design and Innovation in		
				Rural Technology		
2.	M. Sc. Design	2 years (4 semester)	15+02(EWS)	Rural Entrepreneurship, IT		
	and Innovation in		=17	in Rural Development,		
	Rural technology			Commercial Production		
				Technology Rural Health		
				Management		

#### 1. Faculty:

Details of the Faculty Members:

S. No.	Name	Designation	Permanent/Guest Faculty/ Ad hoc/ Temporary	Area of Specialization
1.	Dr. Rohit Kumar Mishra	Associate Professor & Coordinator	Permanent	Rural technologies for sustainable development; Herbal Antimicrobials, Organic farming; Nanotoxicity, Heritage agricultural; Bio- instrumentation; IPR, Microbes & its uses, Environmental microbiology
2.	Dr. Shashi Kant Shukla	Assistant Professor	Permanent	Commercial technologies, Basic Botany, Agriculture, Information technology,

				Rural development and its management
3.	Dr. Arpana Pandey	Assistant Professor	Permanent	Rural tech. and dev. Natural resource management, Production and post- harvest management, Rural health management, Information technology in rural development

### 2. Supporting Staff: NA

S. No.	Name	Gender	Category	Designation/work	Permanent/Temp. / Daily wager /Contract etc.
1.					
2.					
3.					
4.					
5.					

#### 3. Students:

#### (A) Details of Students, Year wise and Reservation wise (2019-2020): Total PG seats: 17

Course		Gen		(	<b>)BC</b>	-		SC	-		ST	-		PwD	-	Т	OTA	L
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Ph.D.	01	02	03	01	00	01	01	00	01									05
PG (17 Seats)	02	07	09	04	01	05	02	01	03									17
UG																		
Diploma																		
Any Other																		
Any Other																		
Total	03	09	12	05	01	06	03	01	04									22

#### (B) Details of Research Scholars in the Department (enrolled in 2018-2019):

S.	Name of	Area/	Торіс	Gender	JRF/	Category	Date of
No.	Research	Subfield			NET/		Enrollment
	Scholar				CRET		
1.	Ashutosh	Science and	Assessment and	Male	CRET	GEN	22.01.2020
	Kumar Singh	Society	analysis of green Infra				
			structure of Urban				
			areas with special				
			emphasis to				
			environmental aspects				
2.	Astha	Science and	Studies on impact of	Female	CRET	General	22.01.2020

	Srivastava	Society	herbal aroma with reference to biota				
3.	Chanchal	Science and Society	Impact of corporate social responsibility in rural development with special reference to women empowerment in uttar- pradesh	Female	CRET	General	22.01.2020
4.	Pradeep Sahu	Science and Society	Studies on innovative cost effective organic mushroom production with special reference to rural entrepreneurship	Male	CRET	OBC	22.01.2020
5.	Mayank Mohan	Science and Society	Impact of Pradhan Mantri Ujjwala Yojana (PMUY) over pulmonary health of rural women and inflammatory imprinting in mouse model	Male	CRET	SC	22.01.2020

## 7. Seminars/Workshops/Conferences conducted by the department:

S. No.	Name of the Seminar/ workshop/conference	National / International	Duration and dates	Funding/sponsor Agenc(y/ies)	No. of Participants	No. of Papers presented in
1.	"Do's & Don'ts In Rural Visits"(01day)	National (University Guest House, UoA)	01 day 03.08.2019	DIC, MHRD Project	50	
2.	"Identify budding youth towards Rural Development with Innovative Ideas"	National (D. D. Pant Auditorium, Department of Botany)	01 day 16.10.2019	DIC, MHRD Project	100	
3.	Innovative Idea Writing Competition-2020	National (Home Science Dept. UoA)	01 day 06.02.2020	DIC, MHRD Project	100	
4.	Innovative Idea Writing Competition-2020	National (Zoology Dept. UoA)	01 day 06.02.2020	DIC, MHRD Project	50	

# 7. Training/orientation/refresher courses/special lectures conducted by the Department: (Special Lectures)

S.	Name of the course	<b>Duration and</b>	Funding/sponsor	Speakers
No.		dates		
1.	IRR with special reference to Rural Entrepreneurship	13/02/2020	DIC, MHRD	Shri. Arvind K. Shukla Advt. Supreme Court of India
2.	Role of Science for the welfare of the Society (Science Day)	28/02/2020	DIC, MHRD	Prof. A. S. Raghubanshi, Director, Institute of Sustainable Development, BHU,
3.	Rural Entrepreneurship	14/03/2020	DIC, MHRD	Dr. Dibashis Banerji

## 8. Funding received during the period (amount/purpose/agency):

S. No.	Agency (UGC/DST/CSIR/ICSR etc.) (including Allahabad University annual grants)	<b>Purpose</b> (Infrastructure/ upgradation / conference /seminar/ training etc.)	Amount
1.	Allahabad University annual grants	Lab Grant	1.5 Lakhs
2.	Ministry of Rural Development (MoRD), Govt. of India	Evaluation of Dr. Shyama Prasad Mukherji RURBAN Mission	Rs. 7,72,790/-

#### 9. Research Projects:

S. No.	Name of Project	Duration	Funding Agency	Total Amount	Principal Coordinator	Annual Grants (2019-20)
	Evaluation of Dr. Shyama Prasad Mukherji RURBAN Mission of Uttar-Pradesh by MoRD, Govt. of India.	Up to 01 Year	Ministry of Rural Development (MoRD), Govt. of India Ref. No. 506246/2019/NLM	Rs. 37,08,210/-	Dr. Rohit Kumar Mishra	Rs. 7,72,790/-
1.	Rural Innovation Centre, DIC, MHRD	04 years	MHRD, Govt. of India	50 Lakhs	Dr. Rohit Kumar Mishra	Rs. 10, 85, 168/- (2018-19)
2.	PostProjectEvaluationStudyof104GramGramPanchayatofSaansadAdarshGramYojana(SAGY)of1stphaseofUttarPradesh	06 Months	Ministry of Rural Development, New Delhi	46.0 Lakhs	Prof. Anupam Dikshit	Rs. 12,19,666/- Lakhs

#### 10. Academic Organizations (headquartered in the department): NA

S.No.	Name	Nature (National/ International)	Objectives
1.			
2.			

#### 11. Journals published by the department: NA

S. No.	Title	Nature (National/ International)	Established	Annual/bi- annual /quarterly	ISSN
1.					
2.					
3.					

#### **12. Other publications** (Book chapter etc.):

S. No.	Title	Туре	Author(s)	Publication	ISSN/ISBN
1.	Medicinal and Aromatic Plants: Store House to Herbal Antimicrobials. Book Name: Advances in Pharmaceutical Biotechnology (Springer)	Book Chapter	Singh, R., Pandey, A., <b>Mishra,</b> <b>R.K.,</b> Shukla, A.C. and Dikshit, A. (2020).	Springer Nature Singapore Pvt. Ltd. (International)	<b>ISBN</b> 978- 981-15- 2194-2.

#### **13. Publications**: (During 2019-20) (attach separate sheets if required):

S. No.	Nature*	Title	Published in	Authors(s)	ISSN/ISBN
1.	Book	Medicinal and	Advances in	Singh, R.,	<b>ISBN</b> 978-
	Chapter	Aromatic Plants:	Pharmaceutical	Pandey, A.,	981-15-
		Store House to	Biotechnology,	Mishra, R.K.,	2194-2.
		Herbal	Chapter 3 pp 29-	Shukla, A.C. and	
		Antimicrobials.	38. DOI:	Dikshit, A.	
			10.1007/978-981-		
			15-2195-9_3 ©		
			Springer Nature		
			Singapore Pvt.		
			Ltd.		

\*Nature: RPj= Research paper in Journal, RPb=Chapter in Book, RPc=Full Paper in conference proceedings, PR= Review Article; B=Book, edB=Edited book etc.

#### **\*** Future Projections:

#### Proposed Courses

S.	Name of Programme	Nature	Duration	Proposed or	Intake	Remarks
No.		(Degree		In process	of	
		/Diploma/		(If proposed enclose	Students	
		training		copy of proposal)		

	etc.		

#### Proposed Projects/SAP Grants etc. NA

S. No.	Type of Project/grant	Title/Name	Duration	Proposed amount	Proposed or In process (If proposed enclose copy of proposal)	Remarks
1.	Research project Submitted by Dr. Rohit K. Mishra	Dissemination of knowledge of traditional herbals for maintaining routine health and hygine	03 Years	Rs. 23,56,000/-		Agency: DST
2.	Research project Submitted by Dr. Arpana Pandey	Innovative initiative for menstrual health management in Rural Prayagraj District	02 Years	Rs. 22,00,000/-		Agency: ICSSR

#### **14. Problem Areas:**

(Mention problem areas for the department – point-wise)

- **1.** Lack of Computer Laboratory
- 2. Lack of Infrastructure
- 2. Lack furniture and cooling device (AC) in our centre
- 3. Lack of laboratory for Research Scholars

#### 15. Awards/ Achievements:

#### Awards of Dr. Rohit K. Mishra, Coordinator, CSS, IIDS, UoA

**1.** 28/09/2019: Dr. Rohit Kumar Mishra: Key note Speaker on National Seminar on "Environment issues and Rural Development" at Shyama Kumari P.G. College (Affiliated with Rajju Bhaiya State University), Prayagraj.

**2.** 14/12/2019: Dr. Rohit Kumar Mishra: Chief Guest One day Training Programme on Mushroom cultivation and Organic Farming for Entrepreneurship at SVNU, Sagar, Madhya Pradesh.

**3.** 07/02/2020: Certificate of Appreciation received by Dr. Rohit Kumar Mishra for Excellent performance by the Centre of Science and Society, IIDS, UoA during DIC, MHRD, Meet at Motilal Nehru National Institute and Technology (MNNIT), Prayagraj.

**4.** 17/01/2020: Dr. Rohit Kumar Mishra, represented University of Allahabad during RURBAN meeting at NIRD & PR, Hyderabad sponsored by Ministry of Rural Development (MoRd), New Delhi.

# Activities of Centre of Science and Society, IIDS, UoA, Session (2019-2020)



**Fig. 1** One day Soil testing workshop for M.Sc. Design and Innovation in Rural Technology Students at Centre of Science and Society, IIDS, UoA



**Fig. 2** Gram Pravas for final year students of M.Sc. Design and Innovation in Rural Technology Students at Pakri Sewar Village with Prof. K.B. Pandey Former Vice Chancellor Kanpur & Chitrakoot Universities



**Fig. 3** One day workshop on "Do's and Don't's during Rural Visits" at University Guest House sponsored by Vibha Vani and DIC MHRD Project, with Commisner NRLM Mr. Ajeet Singh; Prof. Anupam Dikshit FNASc., Shri Gopal Tiwari Ji, Dr. Rohit K. Mishra, Dr. Rajesh Kumar, Dr. Shashi Kant Shukla and Dr. Arpana Pandey



**Fig. 4** One day seminar on "Identify budding youth towards Rural Development with Innovative Ideas" at DD Pant auditorium under DIC MHRD project



Fig. 5 Interaction of M.Sc. Students with Faculty member of Centre of Science and Society, University of Allahabad, Prayagraj



**Fig. 6** M.Sc. Students and Research Scholar of Centre of Science and Society, University of Allahabad visited Bioved Research Institute and interact with Director Dr. B.K. Dwevedi and Scientist Dr. Himanshu Dwevedi



Fig. 7 Innovative Idea writing competition under DIC MHRD Project at Zoology Department and Home Science Department, UoA



**Fig. 8** DIC meet at MNNIT Allahabad under the supervision of Centre Coordinator Dr. Rohit K. Mishra



**Fig. 9** Special Talk under DIC Project on IPR with special reference to Rural Entrepreneurship by Shri Arvind Shukla Advocate Supreme Court of India



**Fig. 10** Invited talk by Prof. A.S. Raghubanshi FNA, Director, Institute of Sustainable Development, BHU under Vibha Vani Prayagraj Chapter on the occasion of National Science day



Fig. 11 Presentation of Annual progress report and teachers meet at Centre of Science and Society, IIDS, UoA



Fig. 12 Plantation in adopted village Ramapur, Block-Bahadurpur, Tahsil-Phulpur, District-Prayagraj



**Fig. 13** DIC meeting with Shri Nitish Kumar, MHRD under the supervision of Prof. R.K. Singh, Coordinator, DIC Project, University of Allahabad, Prayagraj



**Fig. 14** University of Allahabad developed essential oil based herbal sanitizer at Rural Innovation Centre, under DIC project with supervision of Prof. R.K. Singh, Coordinator, DIC Project, University of Allahabad, Prayagraj



**Fig. 15** Honb'le Vice-chancellor University of Allahabad launched Hand Sanitizer (SPARSH) under banner of Design Innovation MHRD Project.

सेंटर ऑफ साइंस के असिस्टेंट प्रोफेसर ने बनाया सेनिटाइजर, कुलपति प्रो. आरआर तिवारी ने गुरुवार को किया लांच

# इविवि में बनाया औषधीय सेनिटाइजर आधुनिक मशीन करेगी मोतियाबिंद की जांच

#### उपलब्धि-१

#### प्रयागराज | निज संवाददाता

इलाहाबाद विश्वविद्यालय के सेंटर ऑफ साइंस एंड सोसायटी के समन्यवक एवं असिस्टेंट प्रोफेसर डॉ. रोहित मिश्र ने औषधीय एसेंशियल ऑयल युक्त लिक्टि और जेल हैंड सेनिटाइजर 'स्पर्श' बनाया है। इस उत्पाद को एमएचआरडी की परियोजना डिजाइन इनोवेशन सेंटर के अंतर्गत तैयार किया गया है। हैंड सेनिटाइजर की लॉचिंग कुलपति प्रो. आरआर तिवारी ने गुरुवार को की। प्रो. तिवारी ने कहा कि स्पर्श नामक यह सेनिटाइजर औषधीय गुणों से युक्त है जोकि हमारी त्वचा के लिए भी सरक्षित है और इस विश्वव्यापी कोरोना गमारी के विरुद्ध कारगर है। सेंटर ऑफ साइंस एंड सोसायटी के

समन्यवक डॉ. रोहित मिश्र ने बताया कि



इविवि में बनाया गया हर्बल सेनिटाइजर लांच करते कुलपति प्रो . आरआर तिवारी।

स्पर्श हैंड सेनिटाइजर में एल्कोहल के साथ अजवादन के एसेंशियल ऑयल का प्रयोग किया गया है जिसमें 39.2% थाईमॉल पाया जाता है। इसको युरोपियन फार्मास्यूटिकल एसोसिएशन ने सेनिटाइजिंग तत्व के रूप में घोषित किया है। इसमें लेमन ग्रास एवं नीम के सत के साथ ग्लिसरोल को भी डाला गया है जो कि हमारे हाथों की सुरक्षा के लिए उपयुक्त

है। डिजाइन इनोवेशन सेंटर के समन्यवक प्रो. आरके सिंह ने विश्वविद्यालय के इस प्रयास के लिए डीआईसी, आईआईटी बीएचयू के डॉ. मनीष अरोरा एवं एमएचआरडी को धन्यवाद दिया। इस अवसर पर रजिस्ट्रार प्रो. एनके शुक्ल, डीन साइंस प्रो. शेखर श्रीवास्तव, चीफ डीन साइस प्रो. शेखर श्रीवास्तव, चीफ प्रॉक्टर प्रो. आरके उपाध्याय, डॉ. शैलॅंद्र राय, रवि निराला आदि मौजूद रहे।

#### उपलब्धि-२ प्रयागराज | अनिकेत यादव

बढती उम्र के साथ आंखों में मोतियाबिंद की बीमारी आम है। इसकी प्रारंभिक स्तर पर जांच करने के लिए एमएनएनआईटी ने अत्याधुनिक मशीन ईजाद की है। इस मशीन से कोई भी साक्षर आंखों की स्क्रीनिंग कर सकता है। मोतियाबिंद की शुरुआत में ही जानकारी हो जाएगी और संबंधित व्यक्ति समय रहते इसका इलाज करा सकेगा। आखों की जांच इमेज प्रोसेसिंग एंड लर्निंग मशीन से होगी। संस्थान के इलेक्ट्रानिक्स एंड कम्यनिकेशन इंजीनियरिंग ( ईसी ) ब्रांच के एसोसिएट प्रोफेसर डॉ. बसंत कुमार

और उनके शोध छात्र शाश्वत पाठक ने कैटरेक्ट डिटेक्शन एंड ग्रेडिंग सिस्टम



एमएनएनआईटी में बनी मशीन से मोतियाबिंद का फील्ड ट्रायल। • फाइल फोटो से इमेज प्रोसेसिंग एंड लनिंग मशीन तैयार की है। इससे मोतियाबिंद की सुगमता से पहचान की जा सकेगी। डॉ. बसंत ने बताया कि इस मशीन को बनाने में तीन साल से अधिक समय लगा है। इस मशीन को कोई भी पढ़ा लिखा व्यक्ति संचालित कर आंखों की स्क्रीनिंग कर

सकता है। जांच में मोतियाबिंद के ल मिलने पर वह मरीज को आंख डॉक्टर को रिफर कर देगा। डॉ. ब ने बताया कि इस मशीन का फी ट्रायल के साथ ही पेंटेंट भी हो चुक स्टार्टअप के जरिए शोध छात्र कंपनी से समन्वय कर रहा है।



Fig. 16 SPARSH: essential oil based herbal sanitizer developed under DIC MHRD Project reported by several print and digital media.