



**AMITY**  
**UNIVERSITY**  
— HARYANA —

**NAAC 'A'**  
**GRADE**  
ACCREDITED UNIVERSITY

# REPORT ON SUSTAINABLE DEVELOPMENT GOAL



**YEAR 2021-22**



## PREAMBLE

Amity University Haryana, a research and innovation driven University, is truly committed to the cause of 'innovation and entrepreneurship'. The 'Vision' of Amity University Haryana (AUH) is "to be a world class Centre of creativity and innovation and to contribute to the progress of humanity through excellence in education, industry and society relevant research and extension services."

## TEACHING AND LEARNING

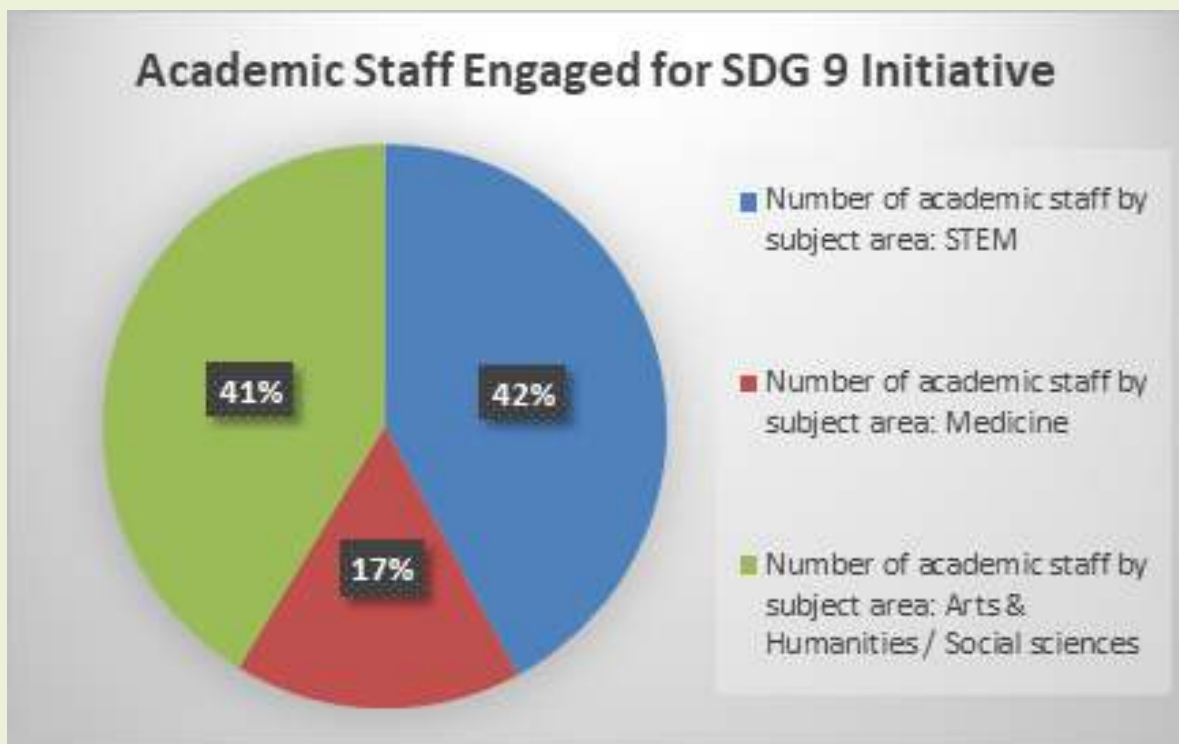
There are 64 programs offered at AUH at UG and PG level which are designed to impart knowledge to the students related to sustainable building designs, energy efficient techniques which can be adopted by industry and household to meet their energy demands. Table below lists the programs which are related to SDG 9:

S. No	Programes	School/Institute
1	BBA	<b>Amity Business School</b>
2	MBA	
3	MBA (Banking & Finance)	
4	MBA (Executive-Full Time)	
5	BBA (Banking & Finance)	
6	MBA (Hospital & Healthcare Management)	
7	Bachelor of Hotel Management	<b>Amity School of Hospitality</b>
8	Bachelor of Tourism & Travel Management	
9	B.Sc. (Hons) - Biotechnology	<b>Amity Institute of Biotechnology</b>
10	B.Tech (Biotechnology)	
11	M.Sc. (Biotechnology)	
12	M.Tech (Biotechnology)	
13	B.Sc. (Hons) Biological Science	
14	M.Sc. (Data Sciences)	
15	M.Tech (Solar & Alternate Energy)	<b>Amity School of Applied Sciences</b>
16	M.Sc. (Biochemistry)	
17	M.Sc. (Forensic Sciences)	
18	B.Sc. (Hons) - Forensic Sciences	
19	M.Sc. (Renewable Energy)	
20	B.Sc. (Hons) - Earth Sciences	<b>Amity School of Earth and Environmental Studies</b>
21	M.Sc. - Environmental Sciences & Management	
22	B.Tech (Civil Engineering)	<b>ASET</b>
23	B.Tech (Computer Science & Engineering)	
24	B.Tech (Electrical & Electronics Engineering)	
25	B.Tech (Electronics & Communication Engg.)	
26	B.Tech + M.Tech (Artificial Intelligence & Robotics) Integrated	
27	B.Tech (Mechanical Engineering)	
28	M.Tech (Electronics & Communication Engg.)	

29	B.Tech (Aerospace Engineering)	
30	B.Tech (Biomedical Engineering)	
31	B.Tech. - Computer Science & Engg. + MBA (Dual Degree)	
32	M.Tech (Mechanical Engineering)	
33	M.Tech (Civil Engineering)	
34	M.Tech (Network & Cyber Security)	
35	M.Tech (Artificial Intelligence & Robotics)	
36	B.Tech + M.Tech (Data Sciences) Integrated	
37	B.Tech + M.Tech (Network & Cyber Security) Integrated	
38	M.Tech (Data Science)	
39	M.Tech (Defence Technology)	
40	Master of Computer Application	
41	Bachelor of Computer Application	<b>ASET (AIIT)</b>
42	Bachelor of Science (Information Technology)	
43	B. Des. (Fashion Design)	<b>AID (FD)</b>
44	Bachelor of Interior Design	<b>AID (ID)</b>
45	B. Sc Nursing #	
46	M. Sc Nursing #	<b>ACON</b>
47	Post Basic Nursing #	
48	Bachelor of Pharmacy	<b>AIP</b>
49	Bachelor of Audiology & Speech Language Pathology #	
50	Master of Hospital Administration (MHA)	
51	B.Sc. (Dietetics & Applied Nutrition)	
52	Master of Optometry	
53	Master of Optometry (M.Optom) Practitioner	
54	Bachelor of Optometry	
55	M.Sc. (Dietetics & Applied Nutrition)	<b>AMS</b>
56	Master of Public Health	
57	M.Sc. (Clinical Research)	
58	B.Sc. (Medical Lab Technology)	
59	M.Sc. (Medical Lab Technology)	
60	BSc in Molecular Medicine & Stem Cell Technology (MMSCT)	
61	MSc in Molecular Medicine & Stem Cell Technology (MMSCT)	
62	Bachelor of Architecture #	
63	Bachelor of Planning	<b>ASAP</b>
64	Master of Planning (Urban and Regional)	

## Research and Innovation Infrastructure

The University is committed in integrating education with human values, in pursuit of research, nurturing innovations, development of innovative products and innovated systems in an environment of learning. The competent pool of 346 dedicated full time faculty members, experts in their field, is strongly committed to the cause of research and innovation.



### Interdisciplinary Research Clusters

Amity is committed to promote interdepartmental translational research in areas of high national and global relevance such as Cancer Research, Lipidomics, Computational Biology, Infectious Diseases, Nano Science and Technology, Environment and Human Health, Climate Research, Agriculture and Herbal Drug Design and Technology.





### Directorate of research & Publications

DRP is responsible to create a repository of all the innovation ideas, research and publications. Some of the publications in high impact journals for the academic session 2021-22 related to SDG 9 are listed below:

1. Soharu A, Bp N, Sil A. Fly ash bricks development using concrete waste debris and self-healing bacteria. *J Mater Cycles Waste Manage* 2022;24(3):1037-1046.
2. Gupta J, Rathour R, Dupont C, Mishra A, Shekhar Thakur I. Biogeochemical profiling and taxonomic characterization of municipal landfill site by metagenomic sequencing. *Bioresour Technol* 2022;351.
3. Garg A, Nayyar A, Singh AK. Improved seam carving for structure preservation using efficient energy function. *Multimedia Tools Appl* 2022;81(9):12883-12924.
4. Gupta S, Sihag P. Prediction of the compressive strength of concrete using various predictive modeling techniques. *Neural Comput Appl* 2022;34(8):6535-6545.
5. Chahar D, Thakur P, Kumar R, Thakur A. Influence of Mg doping on the structural, electrical and dielectric properties of Co-Zn nanoferrites. *J Magn Magn Mater* 2022;544.
6. Sharma A, Mani N, Bhardwaj R, Kumar K. Thermal Vibration of Rectangle Plate with Two-Dimensional Circular Thickness Effect. *Math Probl Eng* 2022;2022.
7. Das S, Sil A, Naveen BP. Effects of Soil-Structure Interaction on Seismic Fragility of Railway Concrete Bridge, in India. *Iran J Sci Tech Trans Civ Eng* 2022.
8. Das S. Thermal analysis of a house made of composite walls comprising of a solar PV panel and an epoxy/Al polymer located in Gulmarg. *Int J Ambient Energy* 2022.
9. Yadav S, Sharma S, Singh B, Sharma PB. Effect of groove shape on mechanical properties of surface composites of Al 6082 prepared using friction stir processing. *Mater Today Proc* 2022.
10. Bodkhe MG, Sharma S, Mourad A-I, Sharma PB. Finite element analysis of copper tube to study the behavior of equivalent strength during the severe plastic deformation process. *Mater Today Proc* 2022;56:3129-3136.
11. Yadav S, Sharma S, Singh B, Sharma PB. Effect of quenching on post-processed aluminum 6082 alloy using friction stir processing. *Mater Today Proc* 2022;63:387-394.
12. Sharma A, Bhardwaj R, Lather N, Ghosh S, Mani N, Kumar K. Time Period of Thermal-Induced Vibration of Skew Plate with Two-Dimensional Circular Thickness. *Math Probl Eng* 2022;2022.
13. Parkash O, Kumar A, Sikarwar BS. Drag model validation of slurry pipeline using CFD. *J Eng Res (Kuwait)* 2022;10(1B):193-204.
14. Zhu H-, Naveen BP, Wang J, Cheng G, Gao Y. Research Status and Prospect of Anti-slide Piles for Slope Stabilization. *Lect Notes Civ Eng* 2022;230 LNCE:223-236.
15. Negi DP, Abdul Azeed EP. 'No Means No': People's Protest Against Hydroelectric Development in Kinnaur, Himachal Pradesh, India. *Contemp* 2022.
16. Joshi T, Parkash O, Krishan G. Numerical Investigation of Slurry Pressure Drop at

- Different Pipe Roughness in a Straight Pipe Using CFD. Arab J Sci Eng 2022.
17. Yadav S, Sharma S, Singh B, Sharma PB. Comparison of Mechanical properties in Single-Pass, Two-Pass and Three-Pass approach Friction Stir Processing of Aluminium Alloy. Int J Eng Trends Technol 2022;70(1):291-298.
  18. Chao Q, Maneengam A, Margabandu S, Jindal P, Patil PY, Zheng G-, et al. Mechanical and damping property evaluation of jute fiber reinforced composite periodic core sandwich panels. J Nat Fibres 2022.
  19. Soharu A, Naveen BP, Sil A. An Approach Towards Zero-Waste Building Construction. Lect Notes Civ Eng 2022;196:239-257.
  20. Parkash O, kumar A, Sikarwar BS. Computational Erosion Wear Model Validation of Particulate Flow Through Mitre Pipe Bend. Arab J Sci Eng 2021;46(12):12373-12390.
  21. Vats M, Chhabra A, Yudha SS, Choudhary G, Taliyan M. Nanopolysaccharides and pharmaceutical applications. Innovation in Nano-polysaccharides for Eco-sustainability: From Science to Industrial Applications; 2021. p. 201-216.
  22. Effectiveness of existing green rating systems towards zero waste construction. AIP Conference Proceedings; 2021.
  23. Ghosh S. Immersed boundary simulations of fluid shear-induced deformation of a cantilever beam. Math Comput Simul 2021;185:384-402.
  24. Chalia S, Bharti MK, Thakur P, Thakur A, Sridhara SN. An overview of ceramic materials and their composites in porous media burner applications. Ceram Int 2021;47(8):10426-10441.
  25. Gupta A, Sharma A, Singh H, Rajoria CS. Computational and statistical analysis on the U-tube heat exchanger with different passes configuration: Taguchi method. Heat Transf 2021;50(2):1712-1732.
  26. Mandpe A, Yadav N, Paliya S, Tyagi L, Ram Yadav B, Singh L, et al. Exploring the synergic effect of fly ash and garbage enzymes on biotransformation of organic wastes in in-vessel composting system. Bioresour Technol 2021;322.
  27. Bhardwaj R, Mani N, Sharma A. Time period of transverse vibration of skew plate with parabolic temperature variation. JVC/J Vib Control 2021;27(3-4):323-331.
  28. Joon I, Das S, Srivastava CM. Fabrication of Metal-Doped Polymer to Study Its Thermal and Mechanical Properties. Lect Notes Mech Eng 2021:31-42.
  29. Sinha S, Dhamiwal A, Sharma P. Cluster-Based Approaches for Energy Efficiency in Wireless Sensor Network. Lect Notes Networks Syst 2021;177 LNNS:655-664.

## Centers for Excellence

At Amity University Gurugram multiple Centres of Excellence have been established

to promote Research and Development in diversified areas.



The details may be found at: [https://www.amity.edu/gurugram/centre\\_of\\_excellence.aspx](https://www.amity.edu/gurugram/centre_of_excellence.aspx)

**Amity Patent Cell** is highly active in promoting 'patenting culture' among faculty, students and research scholars.

### Research Laboratories

The research ecosystem of the University is strongly supported by over 100 most high-tech laboratories. It offers cutting edge practical exposure to the students and train them to be industry ready professionals. Science, engineering and technology laboratories equipped with modern equipment's such as Confocal microscope Inverted fluorescence microscope, Ultracentrifuge, Gel imaging system, FTIR spectrophotometer, Fluorescence spectrophotometer, Simultaneous Thermal Analyzer ST 8000, NASA-AERONET Multi-Spectral Sun-Sky Radiometer- Model # 133, Modeling of

Air Pollution And Networking (MAPAN), (AQMS) – A suit of PM, Gas and Met Sensors- Model: ESA, Weather and Environmental Monitor (Pocket Weather Tracker)- Model: 4500NV, Aethalometer (Black Carbon & Biomass Burning Analyzer)- New Generation AE-33 to name a few. A newly sanctioned DST-FIST project will add an Nuclear Magnetic Resonance (NMR) spectrometer and a Gas-Chromatograph-Mass Spectrometer to the university research infrastructure. More details may be found at:

<https://www.amity.edu/gurugram/labs>

### Central Instrument Research Facility (CIRF)

The Central Instrument Research Facility (CIRF) is housed at Amity University Haryana, Gurugram provides a central facility of latest and advanced analytical instrument for research and for promoting interdisciplinary research.

### **Amity Lipidomics Research Facility (ALRF)**

***ALRF was established at the Amity University, Haryana in 2018, with funding from Department of Science and Technology (DST-FIST) Gov. of India and Amity University, Haryana.***

The purpose of establishing this facility is to provide the scientific community (within Amity University and external researchers, both academia and industry) with state-of-the-art mass spectrometric techniques for separation, identification and quantitation of biomolecules like lipids, metabolites and proteins.

Please visit:

<https://www.amity.edu/gurugram/lipidomics-research-facility.aspx> for more details.

### **Amity Materials Research Facility (AMRF)**

AMRF established at Amity University Gurugram in 2020, with funding from Department of Science and Technology (DST-FIST) Govt. of India and Amity University Haryana, is open to usage by scientific community and industry people. The

purpose of establishing this facility is to provide the scientific community (within Amity University and external researchers, both academia and industry) with state-of-the-art Particle Size & Zeta Potential Measurement, Thermoanalysis and Spectroscopy Facility for material science research in diverse fields of Applied Sciences.

Please visit:

<https://www.amity.edu/gurugram/amity-materials-research-facility.aspx> for more details.

### **Library**

The libraries at AUH are an integrated knowledge resource centre that is stocked with more than 50 thousand books, periodicals, references, national and international journals, conversing all aspects of academic studies and research materials. The Library has online journals and access to e-journals, databases etc., extensive E-database such as - EBSCO, IEEE, ACM Digital Library, Oxford University Press, Institute of Physics, Nature Journal, Portland Press, Royal Society of Chemistry, Taylor & Francis, American Institute of Physics, AIP, DELNET, SCC Online, Manupatra



## Industry Interactions

Regular industry interaction forms an integral part of the academic curriculum as it helps the students not only get industrial exposure but also a chance to understand the global business practices, to know more:

<https://www.amity.edu/gurugram/industry-interaction>

There are funded projects in collaboration with Industry or R&D Institutions which are carried out by faculty members at AUH:

- The project titled DBT Skill Vigyan Programme under state partnership in Life Science and Biotechnology is awarded to Dr. Rajendra Parsad, which is funded by Department of Biotechnology amounting to Rs. 12300000.
- The project titled Co-ordination between interdependent networks: Network-dynamics and emergence of collective phenomena is awarded to Dr. Nirmal Punetha, which is funded by SERB amounting to Rs. 2119400.
- Project Title- "Fund for Improvement of S&T infrastructure in University and Higher Education Institution (FIST) Programme-2016". PI: Prof. Rajendra Prasad , Funding Agency: FIST-2016, Sanctioned Amount: 16500000.
- Project Title- "Nanotechnology for Healthcare and Environment - Exploring New Horizons", PI : Prof. AK Yadav (ASAS Dept.), Funding Agency: FIST-2018, Sanctioned Amount: 8400000.
- Project Title- "Capacity Building and Personality Development Program (PDP) for female undergraduate and Postgraduate students at AUH", PI : Dr. Rajesh Nair, Funding Agency: National Commission for Women, Sanctioned Amount: 150000



## Happenings, Events and Outreach

During the year, AUH has organised more than 50 events and activities to inspire and support young entrepreneurs. This translates to about an event a week and include FDP/PDP, seminars/webinars, expert talks/guest lectures, training programs etc. A list of the events along with the relevant details is presented below. As may be seen several eminent resource persons from the industry and academia interacted with the students, faculty and staff.`

S No	Date From -	Date - To	No of Days	Title of event	Type of Event	Resource Person
1	12-Jul-21	16-Jul-21	5 Days	Recent Advances, Trends and Challenges in field of Nanotechnology	FDP	<p>Prof Agnishwar Girigoswami Professor CARE, Chennai, India</p> <p>Dr. Sunil K Kushvaha Principal Scientist NPL, India</p> <p>Prof SVS Rana, Professor Nanotoxicology present and future perspective CCSU, Meerut</p> <p>Dr Vinod Singh Associate Professor DTU, New Delhi</p> <p>Dr. Ratheesh Revendran Director CMET, Hyderabad</p> <p>Dr Sanjay Kashyap Assistant Professor Thapar University, Punjab</p> <p>Dr M S Mehta Assistant Professor DTU</p> <p>Dr R S Dhaka Associate Professor IIT – D, New Delhi</p> <p>Dr. Manika Khanuja Assistant Professor JMI, Delhi, India</p> <p>Dr. Paresh Patel Assistant Professor Uka Tarsadia University, Gujarat, India</p> <p>Dr. Dhruv Pratap Singh Assistant Professor IIT Bhilai</p> <p>Dr Ravi Kumar Professor NIT, Hamirpur</p> <p>Prof. P.B. Sharma Vice Chancellor Amity University Haryana</p> <p>Dr. Khusboo Aggarwal Sr. Research Associate Lanchester University, UK</p> <p>Prof. R. P Tandon Professor Delhi University</p> <p>Dr. Raghunath Bhattacharya Visiting Professor IEST, Kolkata</p>
2	19-Jul-21	23-Jul-21	5 Days	Entrepreneurship The new age skills for sustainable future and social development	Professional Development Program	<p>Dr. Roopak Vasishtha CEO &amp; Director General Employability, Skills and Entrepreneurship Apparel Made-Ups &amp; Home Furnishing Sector Skill Council, Govt of India</p> <p>Dr. P. R. Dutta Executive Chair- Centre for Business &amp; Economic Research, Editor-in-Chief, Journal of Business and Retail Management Research, Senior Lecturer Northampton University at Regent College</p> <p>Aakash Gupta Leader, Client Capabilities Hub Mckinsey</p> <p>Mr. Addison Appu VP-Investments ThinkKuvate</p> <p>Mr. Alok Sinha CEO Globus Eight New York, United States</p> <p>Dr. Anuja Pandey Professor-Marketing, Head, India Case Research Centre Case Research Centre – AIMA-ICRC Program Director – PGCM Programs-</p> <p>Dr. Shweta Singh CEO Ennoble</p> <p>Asha Kapoor Managing Director Famhealth (P) Ltd</p> <p>Dr. Vinod Kumar Murti Country Head, Institute of Analytics, London India Institute of Analytics</p> <p>Indranil Bose Dean, School of Business University of Bolton, RAK, UAE</p> <p>Mr. Sameer Kaul Former CEO, COO and CMO @ Top</p>

						Market Leader Brands. India's Top 50 CMOs list Top Market Leader Brands. India's Dr. Madhusudan Bhat Director(Research & Development) iHeal Innovations LLP Prof. M. K. Shome Professor Department of Management and Humanities,National Institute of Technology Arunanchal Pradesh, Ministry of Education. Govt of India Prof. Amar Kr. Sundram Professor - Commercial Legal Practice, Jindal Global Law School O.P. Jindal Global University, Sonipat, Haryana
3	24-Aug-21	24-Aug-21	1 Day	Application of Micro and Nanotechnologies	Seminar	Dr V K Jain Distinguished Scientist & Professor Nanotechnology, MEMS Amity University, Noida
4	20-Sep-21	24-Sep-21	5 Days	Nanotechnology and Materials Science	Webinar	Dr. Amit Seth Associate Professor Nanotechnology and biotechnology Manipur University Mr. Anshuman Assistant Manager Class One Systems Pvt. Ltd. Mr. Hitesh Mamagain Director WITec GmbH Germany Instruments Mr. Shubham Associate Professor Hioki Pvt. Ltd.
5	21-Sep-21	21-Sep-21	1 Day	Innovation and IPRs	Webinar	DR. Rahul Taneja Scientist HSDST
6	7-Oct-21	7-Oct-21	1 Day	Catalytic reaction for a sustainable future	Seminar	Prof. Anirban Das Associate professor, CBFS, ASAS, AUH
7	2-Dec-21	2-Dec-21	1 Day	Innovation Strategy for Universities to Create Opportunities of Entrepreneurship in Mitigating Environmental Issues	Webinar	Dr. B K Sahu Regional Manager & Head Intellectual Property and Innovation NRDC
8	28-Jan-22	28-Jan-22	1 Day	Adventure Tourism & Entrepreneurship	Webinar	Mr. Rakesh Jain Adventure Tourism & Entrepreneurship Outdoor India
9	8-Feb-22	8-Feb-22	1 Day	Hospitality Entrepreneurship & Startup Innovations	Webinar	Chef Atul Malik Managing Director/ Owner Hospitality Wall Street/Papa Whiskey/Penthouse/Karim's/ Le Antares
10	24-Feb-22	24-Feb-22	1 Day	Design Thinking, Critical Thinking and Innovation Design	Webinar	Ms. Ekta Jafri. Design Director Expertise in Product Design, Critical Thinking and Innovation strategy. IBM iX
11	24-Feb-22	24-Feb-22	1 Day	Building Quantitative tools to assess Country Risk for International Investor	Webinar	Mr. Vivien Massot Managing Director Expertise in International Economics TAC Economics India

12	18-May-22	18-May-22	1 Day	Stock Market Operations", by Mr. Chiranjeev Khanna, Founder, Stock Daddy.	Seminar	Mr. Chiranjeev Khanna Head Program & Design, Stock Daddy
13	4-Sep-21	4-Sep-21	1 Day	Campus to Corporate- Transform yourself & Be the Gamechanger	Expert Talk	Mr. Anil Bhasin President (Superannuated) Havells Mr. Ashutosh Chadha Director & Country Head- Govt Policy Advocacy Microsoft Mr. Sharad Gupta Director Corporate Communication and Brand strategy, Vice President and Head -Innovation Escorts Ltd Mr. Samir Kapoor Director Ad Factors Ltd
14	19-Sep-21	25-Sep-21	7 Days	Amity Stem Cell Institute and Kiran Mazumdar-Shaw Centre for Affordable Innovation (KMSCAI) Lecture Series- 2021	Expert Talk	Dr. Arvind Chhabra Professor & Director Stem Cell and Molecular Medicine Amity Stem Cell Institute Dr Manoj Kashyap Associate Professor Amity Stem Cell Institute Dr Vimal Kishor Singh Associate Professor Amity School of Engineering and Technology Dr Suresh K Kalangi Astd. Professor Amity Stem Cell Institute Dr Soumen Chakraborty Scientist - F Institute of Life Sciences (ILS), Bhubaneswar
15	21-Sep-21	21-Sep-21	1 Day	Overview of Market Research and Career Prospects in the Industry	Guest Lecture	Mr. Sandeep Singh Associate Consultant, Global Primary Intelligence IQVIA
16	21-Sep-21	21-Sep-21	1 Day	Solar operated direct energy conversion systems for power generation options	Guest Lecture	Dr Ravita Lamba Asst.Prof. Solar Photovoltaics & Thermoelectric systems MNIT,Jaipur, Rajasthan
17	22-Sep-21	22-Sep-21	1 Day	Role & Relevance of IPR in pharmaceutical Industry	Guest Lecture	Mr. Ravikant Ravi Senior Research Associate, Evalueserve, Gurugram
18	23-Sep-21	23-Sep-21	1 Day	Changing domains and career opportunities	Guest Lecture	Mr. Santosh Jha Peer Reviewer, Pharmacovigilance Wipro India PVT Ltd.
19	24-Sep-21	24-Sep-21	1 Day	Nanotechnology: A prospective towards cleaner environment	Guest Lecture	Prof. Ajay Kumar Mishra Nanoscience/Nanotechnology; Materials Science; Polymers; Composite/Nanocomposites; Photocatalysts and Water Research College of Science, Engineering and Technology, University of South Africa
20	11-Oct-21	11-Oct-21	1 Day	Overview of Diagnostic Industry in our country	Guest Lecture	Mr. Shibu Shrestha Head Hr & Corporate Affairs Pathkind Diagnostics Pvt Ltd
21	15-Nov-21	15-Nov-21	1 Day	E-Commerce Functionality and Technology	Expert Talk	Mr. Sunil Gujral Founder & Director FutureSoft India Pvt Ltd)

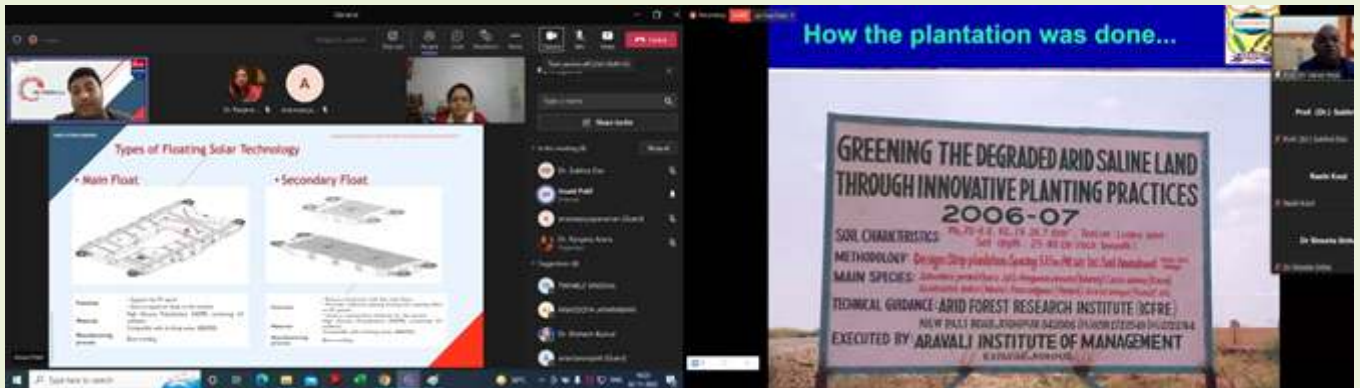


22	28-Feb-22	28-Feb-22	1 Day	Hospitality Industry-Trends and Opportunities	Guest Lecture	Vikramjit Singh President Expertise in Hospitality Sector -Strategy and Higher management Lemon Tree Group of Hotels
23	22-Apr-22	22-Apr-22	1 Day	Intellectual Property Rights	Expert Talk	Harish Sharma IPR Specialist, AUH
24	23-Apr-22	23-Apr-22	1 Day	Nurse Entrepreneur: Breaking the Role stereotypes	Expert Talk	Dr. Ramu K Dean (Medical Surgical Nursing) RGUHS, KARNATAKA
25	14-May-22	14-May-22	1 Day	Patents, Copyrights in Nursing and its Filing Process	Expert Talk	Dr. Dipti Shukla, Principal Samarpan Institute of Nursing and Paramedical Sciences Prof. Abhra Pratip Ray Professor Prathiba College of Commerce and Computer Studies
26	19-May-22	19-May-22	1 Day	IPRs and IP management for Startup	Expert Talk	Prof. Kamal Dev IPR Specialist Shoolini University
27	26-May-22	26-May-22	1 Day	Legal Compliances for Startup	Expert Talk	Mr Asif Iqbal Head Product and Strategy Funding, Startup, Legal Advice Lawered
28	20-Sep-21	20-Sep-21	1 Day	Innovation Day Film Screening	Workshop	Dr. Sam V. Rao, Associate Professor, ASCO, AUH
29	20-Sep-21	20-Sep-21	1 Day	Trash to Treasure	Workshop	Ms. Aditi sharma Teaching Associate Fashion Illustration & Model Drawing, Computer aided design & Computer aided Manufacturing,AID, AUH
30	24-Sep-21	24-Sep-21	1 Day	Furniture Design	Workshop	Ar. Rahul Mehta (Coordinator, BID) ASAP, AUH
31	29-Sep-21	29-Sep-21	1 Day	Smart Materials	Workshop	Prof. cheng-Hsin Chuang Director Biosensors and their applications NSYSU, Taiwan Prof. S.K. Sharma Professor Nanomaterials- synthesis and characterization JNU, New Delhi Dr. Neelam Kumari Scientist Optical properties of smart materials CSIO, Chandigarh
32	13-Apr-22	13-Apr-22	1 Day	Workshop on Innovative Illustrations	Workshop	Ms. Aditi Sharma Teaching Associate Fashion art Illustrations & Model drawing, Computer aided design & Computer aided manufacturing. Amity University Haryana

33	22-Apr-22	22-Apr-22	1 Day	Sustainable Building Practices	Workshop	NA
34	6-May-22	6-May-22	1 Day	National Contest on "Science & Art of Soap Making-A Concept Note	Workshop	Prof. A. Bhattacharya Deputy Director Hospitality AIH, AUH Prof. Satish Sardana Director Pharmacy AIP, AUH Dr. Tanushri Purohit HOD Skills and Marketing ASI, AUH Dr. Subra Das HOD Solar Engineering ASET, AUH Mr. Piyush Gupta CEO Extraction of Essential Oils Kanha Nature Oils
35	11-May-22	19-May-22	9 Days	Textile Testing Technology	Workshop	Ms. Kavita Assistant Professor TEXTILE SCIENCE AID, AUH
36	13-May-22	20-May-22	8 Days	Surface Ornamentation-Innovative techniques of Tie & Dye	Workshop	Ms. Raka Sharma Textile Designer Tamanna
37	25-May-22	25-May-22	1 Day	E-Waste & Circularity	Workshop	Mrs. Panni Verma Project Manager Organizational Development, Project Initiation and Implementation, Training Program Design, Communication & People Orientation, etc. SAAHAS Ms. Deepika Chhetri Project Coordinator natural resources SAAHAS Mr. Shivam Rawat Project Coordinator zero-waste sustainable solutions SAAHAS
38	20-Sep-21	20-Sep-21	1 Day	E-Business case study presentation	Student Activity	Dr. Ravi Ranjan Assistant Professor ACC Mr. Shiv Swaroop Jha Assistant Professor ACC, AUH
39	22-Sep-21	22-Sep-21	1 Day	ASCO's Got Talent	Student Activity	Dr. Pooja Rana Professor Journalism and Mass Communication ASCO, AUH Dr. Preeti Singh Assistant Professor Journalism and Mass Communication ASCO, AUH
40	23-Sep-21	23-Sep-21	1 Day	Innovation Per Second	Student Activity	Dr. Sam Vinay Rao Associate Professor Mass Communication ASCO, AUH Dr. Preeti Singh Assistant Professor Mass Communication ASCO, AUH
41	24-Sep-21	24-Sep-21	1 Day	Start-up "Born from the Seed"	Student Activity	Dr. Nilmani Tripathi Assistant Professor ACC Mr. Shiv Swaroop Jha Assistant Professor ACC, AUH
42	16-Mar-22	16-Mar-22	1 Day	Innovative Ideas in Nursing Science	Student Activity	Mr Surenda Sharma Associate Professor Child Health Nursing ACON
43	28-Apr-22	28-Apr-22	1 Day	Business Quiz	Student Activity	

44	18-May-22	18-May-22	1 Day	BUZZ WIZZ	Student Activity	
45	19-May-22	19-May-22	1 Day	Innovative Contemporary Blouses	Student Activity	NA
46	10-Jan-22	14-Jan-22	5 Days	Building Urban Resilience Through Advanced Technology	Training Program	Dr Piyoosh Rautela Executive Director Uttarakhand State Disaster Management Authority Dr Sudhakar Shukla Head, School of Geo-informatics & Scientist Remote Sensing Applications Centre, U.P., Lucknow Dr. Sweta Baidya Consultant, NIDM Dr. Kopal Verma Junior Consultant Geography, Urban and Regional Planning NIDM Dr. P P Nageswara Rao Outstanding scientist ISRO (Rtd)
47	1-Feb-22	31-Mar-22	30 Days	Training in Lean Six Sigma Foundation.	Training Program	Prof. (Dr.) Padmakali Banerjee Pro Vice Chancellor, Dean Academics Amity University Haryana Mr. Shivendra Sharma Instructor (Lean Six Sigma Master Black Belt) Six Sigma Foundation
48	24-Feb-22	24-Feb-22	1 Day	STUTI (Synergistic Training program Utilizing the Scientific and Technological Infrastructure) An initiative of Department of Science & Technology	Training Program	Prof. (Dr) P.B. Sharma Vice Chancellor AUH Prof. Dr. Vikas Madhukar Dy Pro Vice Chancellor, AUH Maj Gen Gurpal Singh Bal (Retd.) Dean Students Welfare , AUH Prof. (Dr) A.K. Yadav Director Amity School of Applied Science, AUH
49	25-Feb-22	25-Feb-22	1 Day	Lean Six Sigma Certification	Training Program	Mr. Shivendra Sharma Instructor (Lean Six Sigma Master Black Belt) Six Sigma Foundation
50	8-Apr-22	8-Apr-22	1 Day	Industrial Visit to Mindarika Limited	Insuatrial Visit	NA
51	20-May-22	20-May-22	1 Day	Industry Experience Visit to Centre of Excellence, Apparel Made-UPS Home Furnishing Sector Skill Council, New Delhi.	Industrial Visit	Mr. Vipul Wahal centre head office AMHSSC
52	20-Sep-21	24-Sep-21	5 Days	New Challenges and Opportunities in Aerosol Pollution Research: An Indian Perspective	Orientation Programme	<ul style="list-style-type: none"> <li>• Dr. V.K. Soni, Head, EMRC, IMD</li> <li>• Prof. U.C. Kulshrestha, Dean, School of Environmental Sciences, JNU</li> <li>• Dr. Atul Kumar Srivastava, Principal Scientist, IITM-Delhi Branch</li> <li>• Prof. Sagnik Dey, Chair &amp; Associate Professor, IIT-D</li> <li>• Dr. Sachin Ghude and Dr. Gaurav Givardhan, Senior Scientists, IITM, Pune</li> </ul>
53	8-Apr-22	11-Apr-22	4 Days	Internal Smart India Hackathon-2022	Hackathon	NA

54	11-May-22	11-May-22	1 Day	Integrated Approach in Science and Technology for Sustainable Future	Celebration Day	Dr. S.K Varshney Scientist G, Head, International Co-operation DST Dr. Nirmaljeet Singh Kalsi, IAS(Retd.), Chairperson, NCVT Dr. N K Mathur Member Central Water Commission (Dr.) Arun Deep Ahluwalia Ex HOD, Department of Geology
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Webinar on Different types of PV Module mounting Structures for Rooftop and ground mounted solar power system organized on 2nd Nov. 2022.

Glimpse of the National Energy Conservation Day, organized on 14th Dec 2021



## Research Project, Publication, and Patents

During the last year, over 54 research and consultancy projects received grants worth Rs 21.7 Cr from Govt & Non Govt agencies, major science & technology organization such as:- DST, UGC, RFBR, SERB, ICMR, FIST, MNRE, DBT, etc. apart from industry collaborators including foreign ones. The University has filed 175 patents. 15 authored books, more than 200 book-chapters and 4900 research paper were published by faculty and students in reputed national and international journals. The Patent Facilitation

Centre provide needed support to faculty in patent filing process.

### Entrepreneurship and start-up ecosystem

Overall research ecosystem of the University provides an excellent opportunity for setting-up start-ups and facilitate in nurturing the innovation culture of the university and act as an accelerator of commercialization of the research outcomes of the University and also be advantageous for the entrepreneurs to connect them with industry, society and government entities and achieve maximum efficiency in the development of companies.



### v Amity Innovation Incubator

Incubator at Amity University Haryana has a clear philosophy to encourage and incubate technology based new enterprises with innovative products and services with a mandate to strengthen collaboration between industry & academia and turn ideas into visible businesses have to encourage the students for entrepreneurship. The thrust

areas are ICT, Environment & Health Care, Agribusiness, Biotechnology and Nanoscience, Artificial Intelligence & Robotics

### Broadly, Amity Innovation Incubator provides the following services to its incubatees:

- Mentoring and Advisory
- Financial Advisory and Support

- Infrastructure and Support

Amity Innovation Incubator, Gurugram is supported by Ministry of Electronics and Information Technology under MeitY Startup Hub TIDE 2.0 G3C Incubation Centre

- More than 23 Student start-ups
- Strong pipeline of high potential innovative start-up ideas
- More than 50 events on Entrepreneurship promotion and workshops have been organized during last one year to support existing entrepreneurs and students community

- Direct support to Meity Entrepreneurs via academic partnership with University

- Strong advisory and mentoring committee with decades of relevant experience and networking with more than 1000 leading companies and a pool of more than 200 industry mentors. Networking with other Institutions/Labs/Academia: MoUs with reputed international Universities and R&D Centres for education and research.



Amity Innovation Incubator in collaboration with Meity

**v Entrepreneurship Cell (E-Cell):**

Further, E-Cell operating is actively involved in creating an ecosystem of entrepreneurship and start-ups in the campus by involving students in various entrepreneurial events & activities, providing various opportunities to students to interact with entrepreneurs and helping them in developing business ideas and providing start-up support to the students through Amity Incubation Centre.

- Entrepreneurship Awareness Camps
- Fortnightly lecture series – 'Real Entrepreneurs, Real Story'
- Idea and design thinking workshops
- B. Plan competitions
- Hackathons
- Entrepreneurship Boot camps
- Brainstorming sessions

**v Institute Innovation Council under Ministry of Human Resource**

## Development, Government of India

Amity University Haryana Institution Innovation Council is primarily responsible for fostering entrepreneurial skills amongst students and assisting budding entrepreneurs by providing them with necessary resources. Our vision is to develop, support and deliver the Entrepreneurship spirit among students in their quest to achieve success in establishing their venture at all junctures. Our mission is to explore the opportunities for self-employment and inculcate the spirit of 'Entrepreneurship' in young Amitians and nearby societies to foster the brightest ideas to one platform and convert them into business.

### v Rural Innovation and social Entrepreneurship (RISE)

Amity rural innovation incubator will incubate rural innovation based ventures virtually through its execution partner and Amity Venture fund will invest Seed Capital in those

ventures to take it to the next level. Execution partner will scout & select potential innovations and provide on ground incubation support to the ventures for running it successfully The 'Rural Innovation Incubator' (RII) at AUH is aimed at providing low cost need based technological solutions for rural areas which are technically feasible, economically viable, socially acceptable, environment friendly, consistent with household endowment and relevant to the needs of rural people. Under RII, students have done a survey of nearby villages and worked out on providing alternative solutions to the power and energy needs of these villagers. As a result, the incubator has 'beta-tested' Solar technology in Langra village. The Solar Street Lights and Solar Batteries have been installed and their results were monitored. The feedback has been taken from the local villagers which was very positive and enthusiastic.





## v Courses on Entrepreneurship and Skill Development

AUH is a multidisciplinary University offering UG, PG and PhD programmes in various disciplines of Science, Technology, Management, Liberal Arts, Law, Earth & Environmental Science and Medical & Allied Health Sciences in which about 6000 students are enrolled, including over 500 PhD research scholars.

- Ministry of Skill Development and Entrepreneurship had empanelled AUH as training partner under PM YUVA Yojna to educate and equip potential and early stage entrepreneurs. The University has target to impart formal training of entrepreneurship and prepare 2,500 entrepreneurs in next 5 years. under this Entrepreneurship course is being offered as full time Flexible certification course with 18 credit and 6 tracks. Various programmes are offering Entrepreneurship development as one of the subjects for the awareness and understanding of entrepreneurship.
- The University has been selected for the prestigious 'Hunar Sai Rojgar Tak' under the scheme of Capacity Building for Service Providers' of Ministry of Tourism;
- The University has selected by National Institute of Solar Energy, Ministry of Renewable Energy for 'Suryamitra Skill Development' Training in Solar PV Installation.
- MoU with National Skill Development Corporation (NSDC) and other sector Skill Development Councils to impart skill

based courses to students;

## v University Spin offs

Amity Innovation Incubator & ECell worked towards motivating students' ideas and help them to convert into ventures. More than 23 ideas converted into ventures in recent years and few of them graduated are listed below:

- **Plabs Solutions Private Ltd** is an enterprise based upon an innovative idea with Intellectual property right, received funding from Meity for support its Pre-Doctor diagnosis platform. PreDoc is India's First AI based Audio Visual Platform used for Diagnostics of Symptoms of a Patient.
- **Legal Bites:** Mr Mayank Shekhar alumni student of Amity Law School, his venture Legal Bites is an Ed-tech platform. The website offers opportunities in the form of competitions, events and jobs relevant to the legal fraternity. It has constantly been working to create affordable, high-quality particulars on cases, codes, articles and interviews while catering a cosmopolitan responsibility
- **Elnio Fitment Pvt Ltd:** Mr. Ayush Awasthi, engineering graduate had a dream to start something of his own and started venture during final year of engineering. It specializes in casual and official wear for males and females.
- **Samzan Pvt Ltd:** BBA Graduates from Amity Business School Mr. Faizan & Ms. Samiya started this venture during their graduation at Amity. SAMZAN PVT LTD is a renowned and trustworthy manufacturer and supplier of cookware products, household products & food products.





The following is a list of Startups:

S No	Name of the start up	Thrust Area	Nature of start up
1	SAMZAN	Kitchenware Manufacturers	Manufacturer of kitchen appliances
2	Pustakkosh	Books	Text book rental company
3	Hash tag Food Truck	Food Truck	Food & Beverages
4	Legal bites	Law website	Legal courses portal
5	Aeronot Fragrances Pvt Ltd	Perfume company	FMCG
6	2 Tree Coffee Café	Food & Beverages	Food services
7	Bullskart	E-Commerce	
8	Elino Fitment Pvt Ltd	E-Commerce	Luxury Night wear clothing
9	Ezylegal	Legal Site	Online Legal advisory/consultation
10	P Labs Solutions Pvt Ltd	Health care	Online health related consultation
11	Last Mile Care	Health care	Online health related consultation
12	Cancerrx	Health Care	Online health related consultation
13	TCV COFFEE VAULT BEVERAGES PVT. LTD. (The Coffee Vault)	Food & Beverages	Food and beverages chain
14	Radheyan13 Robotics	Robotics	Robotics and AI based startup
15	Edudap India Pvt Ltd	Edtech	
16	ERESHA TECHNOLOGY INNOVATORS PRIVATE LIMITED		
17	Oralens Healthcare Pvt Ltd	Healthcare	Online health related consultation
18	Kulyantran Global Private Ltd	Robotics	Robotics and AI based startup
19	NanolatticeX	Healthcare	Online health related consultation
20	AIGROEDGE Technologies Private Limited		
21	AMN Tech LLP (CancerX)	Healthcare	Online health related consultation
22	Mimblu	Healthcare	Online health related consultation
23	DAL Waste Solution Pvt.Ltd	Waste Management	

## Collaborations and MOUs

The University has entered various national and international collaborations and MoU to strengthen the ecosystem of education, research and innovation. A few are listed below:

S. No	Institution	Type
1	PHFI	Venture Capitalist
2	Media and Entertainment Skills Council	Knowledge
3	Management and Science University	Education Institute
4	Taiwan Education & Culture	International Agency
5	UAS International A Unit of United Accrual Services Pvt. Ltd. &UAS International Holidays Pvt. Ltd.	Corporate
6	IIT Bombay	Education Institute

The United Nations Sustainable Development Goals (SDGs) are the focus of Amity University Haryana of Eminence. The four pillars of our approach to the SDGs are research, teaching, basic institutional practices, and collaborations.

## **9** **INDUSTRY, INNOVATION AND INFRASTRUCTURE**

