



# **AKS University** **SATNA**



ANNUAL REPORT  
**2021-22**



## “आत्म दीपो भव”

AKS University carries forward the mantle of Aatma deepo bhava meaning ‘self-realization’ is the path to move on and look ahead for a brighter tomorrow.



The University is dedicated to perform in a unique manner to achieve academic excellence in creative way by using innovative ideas to produce perfect human resources and to act as centre for “**Amicable Knowledge Solutions**”.





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## Message



**B.P. SONI**

Chancellor  
AKS University  
and Thinker & Initiator of  
The World Government for World Peace

Dear Members of the AKS University Community,

As we reflect on the achievements of the academic year 2021-22, I am honored to acknowledge the significant milestones that have defined our journey. This year has reinforced AKS University's unwavering commitment to academic excellence, research-driven innovation, and impactful community engagement.

Our faculty and students have distinguished themselves through exceptional achievements in research, academics, and co-curricular activities. Their success reflects our institution's strategic focus on interdisciplinary collaboration and knowledge creation, fostering a thriving environment for intellectual growth and innovation.

This year, we made substantial advancements in infrastructure development, equipping our campus with state-of-the-art facilities that empower students with the resources needed to excel. In alignment with our long-term sustainability goals, we have incorporated socially responsible practices into various initiatives, reinforcing our commitment to creating value both locally and globally.

As we move forward, we recognize the challenges and opportunities that lie ahead. Our focus will remain on strengthening academic rigor, promoting diversity and inclusion, and fostering innovation. Together, we will uphold the core values that define AKS University—integrity, inclusivity, and excellence—while building an academic ecosystem that prepares our students to become global leaders.

I extend my heartfelt appreciation to every member of our university community for your dedication and contributions. Your efforts have been instrumental in shaping our progress, and I look forward to another year of impactful growth and success.





**Dr. R.S Tripathi**

Vice-Chancellor,  
AKS University, Satna (MP) India

## Message

AKS University, Satna, is dedicated to fostering academic excellence and societal development, playing a vital role in nation-building and educational reform. Its extensive initiatives, from advanced research facilities to comprehensive student support programs, underscore this commitment. The university emphasizes holistic education by integrating values and promoting a variety of extracurricular and co-curricular activities. This approach aligns with its mission to cultivate socially aware and responsible citizens. The implementation of the Choice-Based Credit System (CBCS), along with international collaborations and diverse academic offerings, enhances its competitive edge on a global scale. Additionally, AKS University boasts a robust Placement Cell and National Service Scheme, providing students with professional preparation and opportunities for civic engagement. The campus infrastructure, including a well-resourced library and dedicated academic spaces, further enriches the learning environment. These achievements highlight the university's significant educational impact, consistently ranking among the top institutions in India, particularly in the Vindhya region. Overall, AKS University serves as a cornerstone of higher education, driven by a commitment to academic and societal advancement. It is an inviting institution for students who aspire to make meaningful contributions to society and shape a better future.



## Executive Summary

AKS University (AKSU) is a leading University of Madhya Pradesh state established vide by the Govt of Madhya Pradesh Act & Notification no. 44 dated 31.12.2011 (Gazette notification Annx-1) and duly recognized by the UGC under Section (2f) of UGC Act in the year 2014, is committed to nurturing well-rounded individuals equipped to meet the challenges of the future. With a focus on quality education, research and community involvement, the university aims to play a pivotal role in the educational landscape of India. The Campus is spread over approximately 110 acres. The AKS University is situated in the Satna city of Madhya Pradesh, adjacent to NH-75, 4 km from Satna Railway Station and 120 km from world heritage Khajuraho. At present the AKS University is offering 54 courses under 12 faculties and at present total student strength of the University is more than 6000.

A well-established teaching and learning process guided by the best practices and a culture of academic excellence promoting research, innovation & entrepreneurship. AKS University offers a diverse range of undergraduate, postgraduate, and doctoral programs across multiple fields, including Agriculture Science & Technology, Engineering and Technology, Commerce & Management Studies, Social Science and Humanities, Basic Science, Education, Law Pharmacy and Medical Sciences etc. are approved by the respective regulatory bodies like UGC, ICAR, AICTE, BCI, NCTE & PCI.

AKS University has collaborated with the leading universities and Institutions both at global and national level for delivering the best education to its students. It has strong industry connections for the design and delivery of various courses.

The University upgrades its curriculum to keep pace with the latest and relevant trends. It has incorporated courses like Smart Agriculture, Artificial Intelligence, Machine Learning, Data Analysis, Mechatronics, Robotics, Nanotechnology, Financial management, HR Management and many more to



impart training and prepare its students for leadership positions of tomorrow. The academics at AKSU is designed towards providing the students a strong background in fundamentals, an ability to translate it to real-life problems and a capacity to design, build and analyze different products, processes and systems. Guided by international best practices, the teaching-learning process ensures the development of Global Graduate Attributes as recommended by various professional bodies/societies.

As per guidelines of NEP 2020, the academic process is outcome based education system and ensures holistic development of the desired set of skills. Choice Based Credit System provides flexibility to the students to take courses from the areas of their interest. Learner Centric Education with latest pedagogical approaches like active learning, collaborative and cooperative learning, agile methodology ensures holistic development of graduates who understand the impact of their actions/ decisions on the society and environment.

The University envisions developing Sustainable Development as a thrust area of Research and Innovation. The research training provided to our graduate students creates the next generation of leaders well-prepared to advance knowledge and transfer of technology. Several Live Projects are being given by Industry to the students to work on and to come out with innovative solutions. Any new Knowledge created by the Students and Faculty through their research and innovation is disseminated through publishing of books, research papers in the reputed Journals and filing of Patents. The dedication and hard work of the faculties and students is acknowledged in terms of awards & recognition they receive at different forums like, Best Placement in Central India Award by Hon'ble Minister of Higher Education & Technical Education M.P. (Bhopal 29/04/24), Best Placement in Central India Award (New Delhi 02/05/24), Iconic Leader Award 2024 (New Delhi 02/05/24), Soul of India Award 2023 in House of Lords British Parliament.

AKSU continually seek feedback from all our stakeholders, analyze it and take actions wherever required. AKSU conscious of the need to adopt various



measures for quality assurance and have taken suitable measures in that direction. Transparency in all the operations, emphasis on an honest and sincere approach, has gained the respect and hence AKSU is the preferred choice of the faculties and students in Central Region of India.





## **1. ABOUT THE UNIVERSITY**

### **1.1 Approval of Statutory Bodies**

The visionary of AKS University Shri B. P. Soni had started his humble journey to impart quality education in affordable cost by opening a small computer college in the year 1996 at Satna city of Madhya Pradesh, India. The mission was highly appreciated and to fulfill the demand of the Vindhya Region, in the year 2011 the AKS Charitable Trust established the AKS University at Satna, by the Govt of Madhya Pradesh Act & Notification no. 44 dated 31.12.2011 (Gazette notification Annx-1) and duly recognized by the UGC under Section (2f) of UGC Act in the year 2014.

### **1.2 Vision**

The vision of AKS University, Satna is to be globally recognized premier Research University dedicated to “Amicable Knowledge Solutions” with ethical leadership, cooperation, community involvement and research prowess converges to forge innovative solutions for societal challenges and contribute to sustainable future.

### **1.3 Mission**

1. Promote Multidisciplinary Research: Enhance sustainable research across all university faculties, aiming to establish our institution as a leading research and teaching university.
2. Foster Innovation: Encourage innovation at all levels within the university, focusing on intellectual property rights (IPR), patents, incubation centers, and startups.
3. Implement Outcome-Based Education: Adopt updated outcome-based curricula (OBE) to develop graduate attributes and create a student-centric teaching and learning environment.
4. Integrate Teaching and Research: Establish a strong correlation between teaching and research by employing innovative approaches and pedagogies.
5. Collaborate with Institutions: Build partnerships with premier national and international universities, institutes, and industries.



6. Encourage Lifelong Learning: Promote lifelong learning and life skills among students, providing a value-based and culturally enriched education.
7. Focus on Quality Education: Ensure high-quality education while emphasizing research related to sustainable development goals (SDGs) and environmental protection.
8. Develop Independent Thinkers: Equip students with the capabilities to think critically and work independently.
9. Strengthen Industry-Academic Fusion: Foster collaboration between academia and industry through research partnerships, entrepreneurship initiatives, and internships.
10. Ensure Good Governance: Cultivate accountability and transparency among all university stakeholders.
11. Support Diverse Student Backgrounds: Provide a platform for students from diverse backgrounds, including rural areas, to achieve academic excellence and develop human values, fostering an inclusive culture of equality and responsible citizenship.
12. Contribute to Knowledge Society: Play a significant role in developing a holistic knowledge society that benefits local and global communities.

#### 1.4 Core Values of AKS University, Satna

AKS University, Satna, is founded on a set of core values that guide its academic pursuits, administrative practices, and community engagement. These values include:

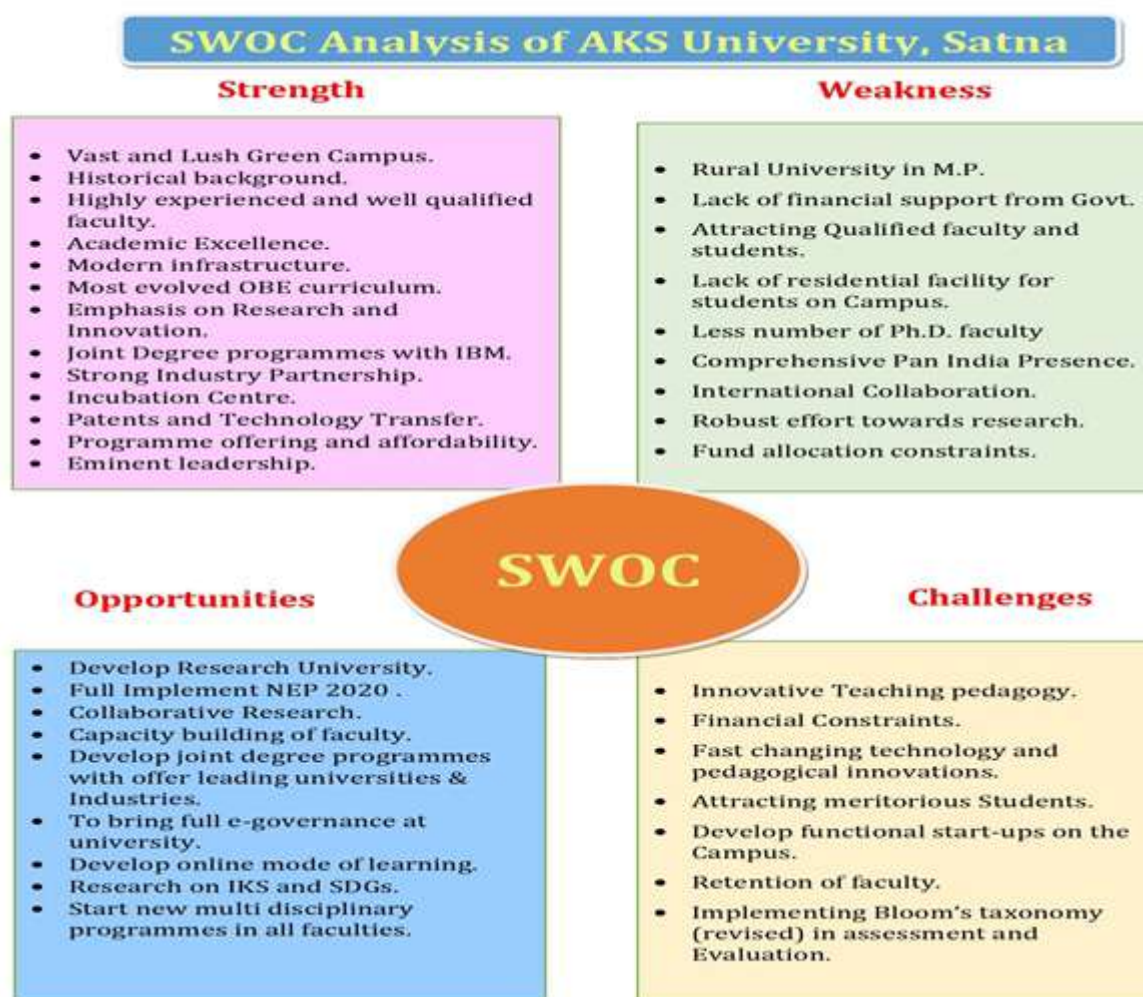
- **Academic Excellence:** Striving for the highest standards of education, fostering intellectual curiosity, and promoting critical thinking.
- **Innovation:** Embracing new ideas, technologies, and approaches to address challenges and drive progress.
- **Social Responsibility:** Contributing to the betterment of society through community engagement, research and service.
- **Ethical Conduct:** Upholding the highest ethical standards in all aspects of university life.
- **Respect:** Valuing diversity, inclusivity, and the dignity of all individuals.



- **Collaboration:** Fostering partnerships and teamwork to achieve common goals.
- **Sustainability:** Promoting environmental stewardship and sustainable practices.

These core values are integral to the university's mission and inform its decision-making processes. These guided the university's commitment to providing a quality education, fostering a positive learning environment, and making a meaningful impact on the community.

### 1.5 SWOC Analysis of the University



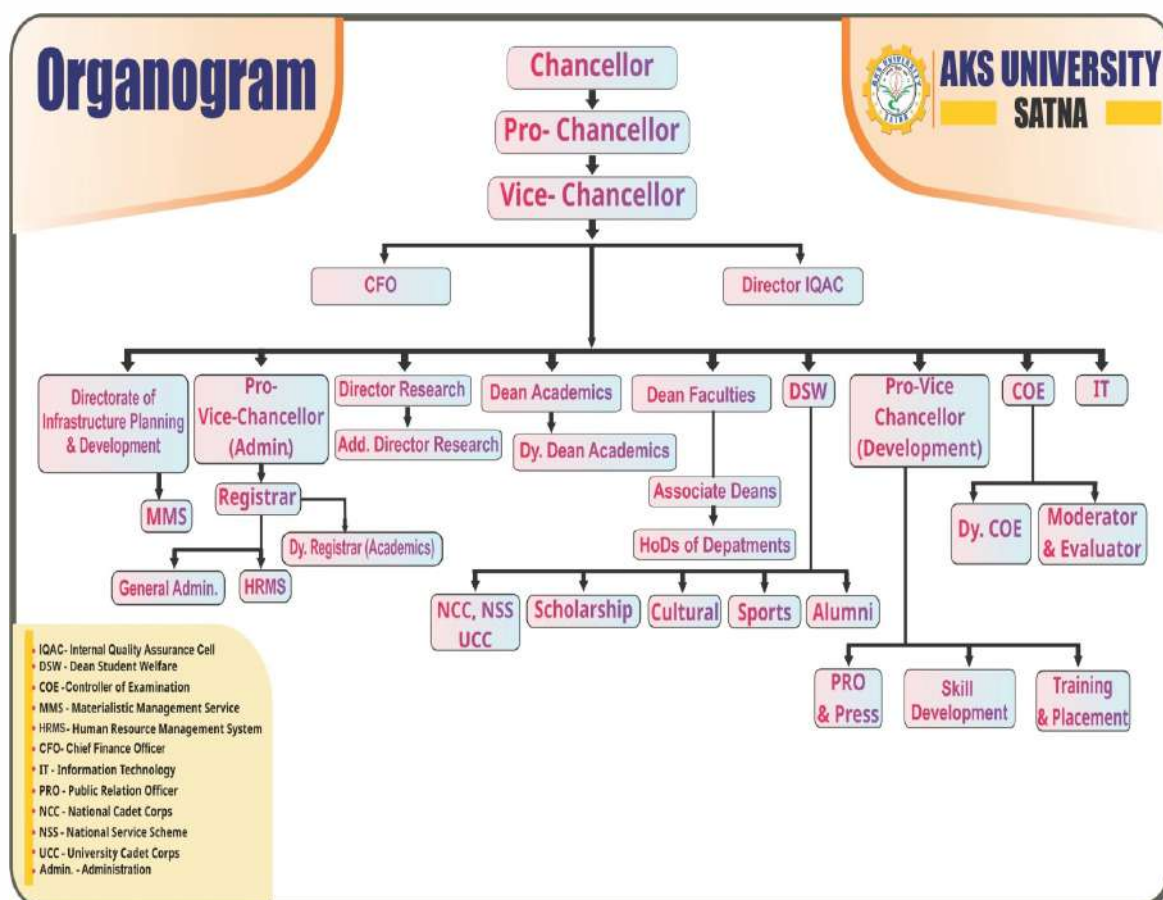
### 1.6 Governance

#### University Credential: - List of Awards



Over the past over the past years, AKS University has achieved significant milestones and garnered numerous accolades. In 2015, the university was recognized by the Ministry of Human Resource Development, Government of India, as the **"Excellent Private University in the Rural Sector."** Additionally, in 2014, it received the award for **"Excellent Private University in Madhya Pradesh"** from the CMAI during the National MP Technical Excellence Education Summit. Furthermore, in 2017, AKS University was ranked **27<sup>th</sup>** among private universities in India according to the India Today survey. Most recently, the university was honored as the **"Best Private University in the Rural Sector"** by Shri Kamal Nath, the Hon'ble Chief Minister of Madhya Pradesh.

AKS University is guided and mentored by a distinguished board of advisors, comprised of experts from various academic, administrative, and financial fields. The boards and committees, their distinguished members and other important details are listed as follows:





## **Boards and Committees**

### **Governing Body:**

The Governing body is the highest decision-making authority of the University. All the movable and immovable property of the University vests in it. The Governing Body provides general superintendence and direction to the University and in particular, regulates and controls the functioning of the University in accordance with the provisions of the applicable Acts, Statutes, Ordinances, Rules, Regulations, Notifications and Orders etc. The Governing Body met minimum three times in an academic year.

### **Board of Management:**

The Board of Management (BoM) is the Chief Executive body of the University and works under the overall directions of the Governing Body. The role of BoM is to establish and monitor the achievement of the University's mission and Objectives. This includes, formulation and monitoring of academic standards, benchmarks and goals; establishment of academic and research units; supervision of the University's finances and budgetary processes; conducting institutional performance evaluations; compliance of the University's statutory and regulatory responsibilities; liaison with external agencies and evaluation of the performance of the senior University functionaries. The BOM met four times in an academic year.

### **Academic Council:**

The Academic Council is the principal academic body of the University. It exercises general supervision over the academic policies of the University, subject to the provisions of the Act, Statutes, Ordinances of the University, The Academic Council is responsible for evaluation and approval of overall educational policy, academic degree programs, requirements for admission, academic honors and awards etc. at the University. The Academic Council





meeting schedule minimum one times in academic year.

## 1.6 Advisory Board of AKS University Satna

The Advisory Board of AKS University is a group of distinguished individuals from diverse fields, including academia, industry, government, and the community. These members are appointed to provide strategic guidance, expert advice, and valuable insights to the university's leadership.

### 1.7.1 Functions of the Advisory Board:

- **Strategic Guidance:** The Advisory Board plays a crucial role in shaping the university's long-term strategic direction. They provide advice on academic programs, research initiatives, infrastructure development, and resource allocation.
- **Expert Advice:** Board members offer their expertise and knowledge to inform decision-making processes. They can provide insights into industry trends, emerging technologies, and best practices in higher education.
- **Community Engagement:** The Advisory Board helps to strengthen the university's connections with the community. They can assist in identifying local needs, fostering partnerships, and promoting the university's role in regional development.
- **Fundraising and Resource Development:** Board members can contribute to fundraising efforts and help secure resources to support the university's goals. They may have connections to potential donors, foundations, or government agencies.
- **External Relations:** The Advisory Board can enhance the university's reputation and visibility by building relationships with external stakeholders, such as government officials, industry leaders, and alumni.

Overall, the Advisory Board serves as a valuable resource for the university, providing guidance, expertise, and support to help it achieve its mission and vision.



## 1.8 Other Committees of the University

A well-organized University set up requires a lot to be monitored for smooth functioning and overall excellence. To name a few, such as attendance, feedback, course uploading in this regard. Managing this entire gamut is not a one man show but it requires a collaborative effort from all staff members. University therefore works in a more decentralized manner through its various committees. These committees are empowered, have more autonomy and thus help in quick decision making. All the committees are headed by coordinators with defined roles and responsibilities to perform.

### 1.8.1 Grievances Redressal Cell

AKS University is unanimously and unequivocally committed to prevent ragging of students in the campus. Several measures are taken by the University to ensure a pleasant and congenial environment for the first-year students. The Academic Counselor for the senior students reinforces the ill effects of ragging of first year students and discourage senior students from doing such acts. Round the clock supervision of first year students in the hostel and classroom activities, educating the students about the avenues available for seeking assistance, in case they are ragged, do's and don'ts in the campus, Guest lecture from experts are some of the measures done to prevent ragging. To make the campus and the hostel ragging free the AKS University constitutes three committee for strict vigilance on any ragging and indisciplinary activities in AKS University. The list of Anti Ragging Committee, Anti Ragging Squad, Disciplinary Committee and **Internal Complaint Committee** of AKS University to look after, are constituted and yearwise given below: -



#### 1.8.1.1 Anti Ragging Committee for the Year 2021 - 22

| Sl No | Name                                                                            | Position         |
|-------|---------------------------------------------------------------------------------|------------------|
| 1     | Dr. G. K. Pradhan, Dean Faculty of Engineering & Technology                     | Chairman         |
| 2     | Prof. R. N. Tripathi, Dean, Faculty of Basic Sciences                           | Member Secretary |
| 3     | Dr. G. P. Richhariya, Dean, Faculty of Life Science & Technology                | Member           |
| 4     | Dr. S. S. Tomar, Dean, Faculty of Agriculture Science & Technology              | Member           |
| 5     | Dr. S. P. Gupta, Head, Department of pharmaceutical Science & Technology        | Member           |
| 6     | Dr. Neeraj Verma, Head, Department of Agriculture Science & Technology          | Member           |
| 7     | Dr. Pankaj Shrivastava, Head, Department of Mechanical Engineering              | Member           |
| 8     | Dr. Kamlesh Choure, Head, Department of Bio-Technology                          | Member           |
| 10    | Ms. Gauri Richhariya, Assistant Professor, Department of Electrical Engineering | Member           |

#### 1.8.1.2 Disciplinary Committee for the Year 2021-22

| Sl No | Name                                                                                           | Position         |
|-------|------------------------------------------------------------------------------------------------|------------------|
| 1     | Dr. Harshvardhan, Pro Vice Chancellor (Dev.)                                                   | Chairman         |
| 2     | Prof. G.C. Mishra, Dean Students Welfare                                                       | Member Secretary |
| 3     | All Head of the Departments/Coordinators<br><i>Member nominated by Hon'ble Vice Chancellor</i> | Member           |



|    |                                                     |        |
|----|-----------------------------------------------------|--------|
| 4  | Shri S. Das Gupta, Asso. Prof., Mining Engg.        | Member |
| 5  | Dr. Abhishek Singh, Asst. Prof., Agriculture Sci.   | Member |
| 6  | Dr. Ashwani A Wao, Asso. Prof., Biotechnology       | Member |
| 7  | Dr. Sudha Agrawal, Asso. Professor, Mathematics     | Member |
| 8  | Mr. Pramod Dwivedi, Asst. Prof., Busi. Admin.       | Member |
| 9  | Ms. Pragya Shrivastava, Asst. Prof., Comp. Sc. & IT | Member |
| 10 | Ms. Gauri Richhariya, Asst. Prof., Electrical Engg. | Member |

**1.8.1.3 Internal Complaint Committee (sexual harassment of female student) for the Year 2021-22**

| SI No              | Name                                                                      | Position          |
|--------------------|---------------------------------------------------------------------------|-------------------|
| 1                  | Ms. Reni Nigam, Assistant Professor, Biotechnology                        | Presiding Officer |
| 2                  | Ms. Shaila Tiwari, Secretary, Anupama Education Society                   | Member (NGO)      |
| 3                  | Mrs. Lovely Singh Gaharwar, Assistant Professor, Department of Physics    | Member            |
| 4                  | Mrs. Rama Shukla, Head, Department of Electrical Engineering              | Member            |
| 5                  | Dr. Rama Sharma, Assistant Professor, Agriculture Science (Extn. No. 314) | Member            |
| 6                  | Mrs. Seema Dwivedi, Teaching Associate, Education                         | Member            |
| <b>Male-Member</b> |                                                                           |                   |
| 1                  | Prof. R. N. Tripathi, OSD                                                 | Member            |
| 2                  | Mr. A. K. Mittal, Director, Mining Training                               | Member            |
| 3                  | Mr. Brajendra Soni, Administrative Officer                                | Member            |
| 4                  | Dr. Mahendra Kumar Tiwari, Professor,                                     | Member            |







neither by the staff nor by the students in the Faculty of Agriculture Science and Technology during the last five years. However, details on Sexual Harassment of women at Workplace (Prevention, Prohibition and Redressal Act, 2013) are clearly explained to the staff and farm workers and students from time to time.

The list of the member of Sexual Harassment Committee for the year 2021-22 of AKS University is given below:

### 1.8.3 Sexual Harassment committee of AKS University

| SI No                | Name and post of the member                                            | Responsibility of the member |
|----------------------|------------------------------------------------------------------------|------------------------------|
| <b>Female-Member</b> |                                                                        |                              |
| 1                    | Ms. Reni Nigam, Assit Professor, Biotechnology                         | Presiding Officer            |
| 2                    | Ms. Shaila Tiwari, Secretary, Anupama Education Society (NGO)          | Member                       |
| 3                    | Mrs. Lovely Singh Gaharwar, Assistant Professor, Department of Physics | Member                       |
| 4                    | Mrs. Rama Shukla, Head, Department of Electrical Engineering           | Member                       |
| 5                    | Mrs. Shikha Tripathi, Teaching Associate, Department of Education      | Member                       |
| 6                    | Mrs. Seema Dwivedi, Office Assisatnt, General Admn. Department         | Member                       |
| <b>Male-Member</b>   |                                                                        |                              |
| 7                    | Prof. R. N. Tripathi, OSD                                              | Member                       |
| 8                    | Mr. A. K. Mittal, Senior Lecturer                                      | Member                       |
| 9                    | Mr. BrajendraSoni, Administrative Officer                              | Member                       |



|                                                                          |                                                                                     |        |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
| 10                                                                       | Dr. Mahendra Kumar Tiwari, Associate Prof.,<br>Department of Environmental Science  | Member |
| 11                                                                       | Mr. Sunil Pandey, Sports Officer                                                    | Member |
| <b>Students-Member [In respect of girl student(s) of AKS University]</b> |                                                                                     |        |
| 12                                                                       | Ms. Mitali Pandey, B.Tech. (Food Technology), 4 <sup>th</sup> Year Student          | Member |
| 13                                                                       | Ms. Shivangi Tripathi, B. Pharma., 4 <sup>th</sup> Year student                     | Member |
| 14                                                                       | Ms. Meenakshi Singh Baghel, B.Sc. (Hons.) Agriculture, 4 <sup>th</sup> Year student | Member |

There is the provision for any complaints can also be communicated through Email: [provc@aksuniversity.com](mailto:provc@aksuniversity.com) and telephone. In this respect the telephone number and email ID of the members are circulated among the staffs and students of the University to lodge complaint. The case of sexual harassment was reported during the year in university as well as in Faculty of agriculture science and technology.

For smooth running of Faculty of Agriculture Science and Technology the following committee are constitutes for the year 2022-23.

#### 1.8.4 Hostel Monitoring Committee

The below Hostel monitoring Committee is advised to take surprise visit to the Hostels registered under AKS University and assess the facility such as accommodation, food, cleanness and congenial study environment of the Hostel at least once in a month and report to the Vice Chancellor.

The Hostel Monitoring Committee for the Year 2021-22

| Sl No | Hostel Monitoring Committee |            |
|-------|-----------------------------|------------|
| 1     | Ms Gauri Richaria           | In- Charge |
| 2     | Ms Pragya Shrivastav        | Member     |
| 3     | Mr Manish Agarwal           | Member     |
| 4     | Mr Atul deepSoni            | Member     |



|   |                   |        |
|---|-------------------|--------|
| 5 | Mr Abhisek Singh  | Member |
| 6 | Dr Rama Sharma    | Member |
| 7 | Ms Madulika Singh | Member |
| 8 | Mr Vijay Singh    | Member |

### 1.8.5 Library committee

With the approval of AKS Management, the below committee is constated to review, procurement of books including e-books and journals for Faculty of Agriculture Science and Technology. The committee will function for three years i.e. upto the year 2024 from the date of this office order.

| SI No | Name of the Official | Committee   |
|-------|----------------------|-------------|
| 1     | Dr S STomar          | Chairperson |
| 2     | Dr K R Maurya        | Member      |
| 3     | Mr Dashrath Patidar  | Member      |
| 4     | Dr T N Singh         | Member      |
| 5     | Dr Rama Sharma       | Member      |
| 6     | Dr Neeraj Verma      | Member      |

### 1.8.6 Management of Farm Waste:

The University has established Vermicompost Unit (30 Pits) near the Dairy Farm. All crop wastes including crop residues, weed materials Horticulture fruits and vegetable wastes and animal waste from diary unit are used to prepare vermicompost. From the vermicompost unit vermin wash is collected and used for protection of the crops University has created facilities to make nutrient rich vermin compost using rock phosphate. The committee constitute for proper disposal of any waste including biological is as given below: -

#### Waste Disposal Committee of AKS University

| SI No | Name                                   | Task             |
|-------|----------------------------------------|------------------|
| 1     | Dr G P Richhariya, Dean (Life Science) | Chairman         |
| 2     | Dr Dinesh Mishra, HOD (Chemistry)      | Member           |
| 3     | Dr M K Tiwari, HoD (Env)               | Member Secretary |
| 4     | Dr Neeraj Verma, HoD, (Agriculture)    | Member           |
| 5     | Dr Akhilesk A wao, HoD, (Computer      | Member           |
| 6     | Dr S P Gupta, HoD (Pharmacy)           | Member           |
| 7     | Dr Kamlesh Chaure, HoD (Biotech)       | Member           |



## **2 Academics at AKSU**

### **2.1 ABOUT THE FACULTIES OF THE AKS UNIVERSITY**

At AKS University Satna, has total 10 numbers of the faculties of studying and some of them are unique to Madhya Pradesh in their course structure and curriculum.

#### **2.1.1 Faculty of Agriculture Science & Technology (FAST):**

The Faculty of Agriculture Science and Technology (FAST) is one of the largest faculties at AKS University, established with a comprehensive integration of teaching, research, and extension programs. The primary mandates of the faculty include:

- Providing quality education in the field of agriculture.
- Advancing learning and conducting research in agricultural science and technology, particularly for rural and marginal farmers.
- Implementing activities related to these objectives through education, research, and extension, in alignment with the requirements of the Faculty and AKS University as a whole.

The educational programs at FAST aim to transform rural unemployed youth into first-rate agricultural entrepreneurs and agri-business managers of tomorrow. The impact of agricultural education is anticipated to be significant, leading to the development of a new generation of entrepreneurs, increased employment opportunities, higher income levels, and improved work environments.

FAST is complemented by a well-equipped agricultural farm spanning 60 acres adjacent to the faculty building, featuring an automatic weather station (AWS), two polyhouses, four nethouses, two mother nurseries, and various experimental fields and laboratories that provide students with hands-on experience. The modern dairy facility houses over 100 cows of different breeds, including Giri, while the poultry section features the rare Kadaknath variety. Additionally, a fishery unit exposes students to diverse agricultural practices and the implementation of innovative crop production techniques.



The faculty also practices organic farming technology, producing approximately 200 tons of vermicompost and Nadep compost annually, which is utilized on the university farm.

FAST is dedicated to maintaining a team of qualified and experienced faculty members who strive to deliver high-quality education and inspire students to embrace their roles as the world's providers of food security.

The Under Graduate and Post Graduate programmes running Under the Faculty of Agriculture Science and Technology of AKS University are as-

|                                                      |                                                |
|------------------------------------------------------|------------------------------------------------|
| <b>UG Level Courses</b><br>(4 Year Degree Programme) | B. Sc. (Hons) Agriculture                      |
|                                                      | B. Tech. (Agricultural Engineering)            |
|                                                      | B. Tech. (Food Technology)                     |
| <b>PG Level Courses</b><br>(2 Year Degree Programme) | M. Sc. Agriculture (Agronomy)                  |
|                                                      | M. Sc. Agriculture (Horticulture)              |
|                                                      | M. Sc. Agriculture (Soil Science)              |
|                                                      | M. Sc. Agriculture (Plant Pathology)           |
|                                                      | M. Sc. Agriculture (Genetics & Plant Breeding) |



Demonstration to the students by a faculty in Agriculture farm



Agricultural farm of Faculty of Agriculture Science and Technology

### 2.1.2. Faculty of Engineering & Technology:

The engineering programs at AKS University, Satna, offer a dynamic and accessible curriculum designed to help students understand the global and social implications of engineering solutions, as well as contemporary engineering challenges. This comprehensive approach allows students to develop and apply relevant skills for their future careers.

The programs cater to a diverse range of students with varying abilities and educational backgrounds, providing both intellectual and vocational benefits. This inclusive educational environment positions the Faculty of Engineering and Technology as the premier engineering institution in the Vindhya region.

Beginning with foundational engineering principles and professional practices, the programs establish a robust and adaptable framework that prepares graduates for a wide range of engineering roles. Students then have the opportunity to specialize in





specific areas of concentration, enabling them to excel in their chosen engineering positions.

Following programs are offered by the Faculty of Engineering & Technology-

|                                                      |                                                                                                                                                        |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UG Level Courses</b><br>(4 Year Degree Programme) | B. Tech in (Mechanical Engineering/ Civil Engineering/ Electrical Engineering / Mining Engineering/ Computer Science & Engineering /Cement Technology) |
| <b>PG Level Courses</b><br>(2 Year Degree Programme) | M. Tech (Mechanical Engineering/ Civil Engineering/ Mining Engineering/ Cement Technology/ Computer Science & Engineering)                             |

There are numbers of adequate Laboratories and workshops for the hands-on training of the students. The strength of a FET is by its experienced teaching faculty members having equal knowledge.



Electrical Instrumentation Lab



Basic Electrical Engineering Lab



Mechanical Engineering Laboratory



Central Workshop

### 2.1.3. Faculty of Life Science & Technology

The **Faculty of Life Science & Technology** has been established with the objective of delivering high-quality education and practical research exposure to cultivate skilled and well-trained biotechnologists and entrepreneurs, in alignment with the needs of academia and industry in the fields of Microbiology and Biotechnology.

The faculty is strengthened by the intellectual contributions of a dedicated team of faculty members and students from across the country. It has a solid foundation in Microbial Technology and Plant Biotechnology, with a primary focus on key areas such as Genetics, Molecular Biology, Industrial Microbiology, Immunology, Bioinformatics, Biochemistry, and other contemporary fields related to Microbiology and Biotechnology.

Students receive comprehensive training in Microbiology, Biochemistry, Genetics, Developmental Biology, Genetic Engineering, Biochemical Engineering, as well as aspects of Biophysics, Biostatistics, Environmental Biology, and Bioinformatics. The interdisciplinary nature of Biotechnology integrates Life Sciences, Chemical Engineering, and Bioprocessing, equipping students with knowledge of industrial processes and the application of chemical engineering principles to design process equipment and optimize production efficiency.



The Faculty of Life Science & Technology offers a range of academic programs, including a two-year Master of Science (M.Sc.) in Biotechnology, a three-year Bachelor of Science (B.Sc. Honours) in Biotechnology, a four-year Bachelor of Technology (B. Tech) in Biotechnology, and a two-year Master of Technology (M. Tech) in Biotechnology. Additionally, the department offers a Doctor of Philosophy (Ph.D.) program in Biotechnology.

#### **2.1.4. Faculty of Pharmaceutical Science & Technology**

The Faculty of Pharmaceutical Science & Technology (FPST) at AKS University, Satna, is a leading institution for pharmaceutical education and research in the Vindhya Region. Originally established in 2006 as the Rajiv Gandhi Institute of Pharmacy, the college was affiliated with Rajiv Gandhi Technological University in Bhopal and became a constituent unit of AKS University in 2012. The Rajiv Gandhi Institute of Pharmacy is approved by the Pharmacy Council of India (PCI), New Delhi.

FPST offers a comprehensive four-year Bachelor of Pharmacy (B. Pharmacy) program, as well as a three-year lateral entry Bachelor of Pharmacy (B. Pharmacy LE) program. Additionally, the department provides a two-year Master of Pharmacy (M. Pharm) program with specializations in Pharmaceutical Chemistry and Pharmaceutics.





Laboratory Facilities at Faculty of Pharmaceutical Science & Technology

### **2.1.5. Faculty of Computer Application & Information Technology**

The Faculty of Computer Applications and Information Technology at AKS University, Satna, is dedicated to equipping students with the vision, creativity, and innovation necessary to navigate the challenges of the corporate world. The department is supported by highly qualified and experienced faculty members who play a pivotal role in the university's academic success.

The faculty is committed to providing an updated curriculum that integrates theory with practical applications, projects, and seminars, enabling students to analyze, develop, and monitor computer systems and their diverse applications. Key objectives include enhancing problem-solving abilities, fostering innovative thinking, promoting analytical skills, encouraging teamwork, and developing strong communication skills. The curriculum also emphasizes readiness to embrace emerging technologies such as artificial intelligence, the Internet of Things (IoT), machine learning, cloud computing, and network security.

The Faculty of Computer Applications and Information Technology features well-equipped laboratories with the latest software updates and a proprietary Management Information System (MIS). Additionally, the department boasts a highly competent teaching staff, further ensuring a robust learning environment for students.





### **2.1.6. Faculty of Basic Sciences**

The Faculty of Basic Sciences at AKS University, Satna, is dedicated to promoting collaborative and interdisciplinary research across various fields of Physics, Chemistry, and Mathematics to meet the evolving needs of society. Basic sciences and research are recognized as vital tools for cultivating a new generation of thinkers and leaders in Science and Technology. In India, the importance of basic science and research has increased significantly in higher education, supported by governmental initiatives such as KVPY, NTSE, and the establishment of prestigious institutions like IISER, NPL, ISRO, TIFR, and developments in Solar and Nuclear Power Plants.

This program's uniqueness lies in its interdisciplinary framework, integrating engineering principles with a strong foundation in the basic sciences. Currently, the Faculty of Basic Sciences offers Bachelor's, Master's, and Ph.D. programs in the domains of Physics, Chemistry, and Mathematics.



**Chemistry Lab of Basic Science**



**Physics Lab of Basic science**

### **2.1.7. Faculty of Commerce & Financial Studies**

The Faculty of Commerce and Financial Studies at AKS University is renowned for its excellence in teaching within a dynamic academic discipline. Our high-caliber academic programs are underpinned by the belief in the transformative power of ideas.



Our faculty, alongside a diverse student body from various social backgrounds, collaborates to uphold the department's distinguished reputation for education at the forefront of economic, institutional, and organizational aspects of commerce.

We are committed to providing a conducive environment for quality education in Commerce, Entrepreneurship, and Research through innovative practices and a focus on holistic development. The faculty is dedicated to establishing itself as an institute of academic excellence, emphasizing the importance of quality education in Commerce and related fields while fostering a concern for societal improvement. We aim to cultivate social, moral, ethical, and intellectual skills in our students, empowering them to become nation builders and sources of inspiration.

Our courses present rigorous challenges, yet our students embrace them, exemplifying our motto: "We demand a lot, but we also give a lot." The Faculty of Commerce and Financial Studies offers a range of courses with specialized areas designed to equip students with the skills necessary to thrive in today's competitive landscape.

|                                                            |                              |
|------------------------------------------------------------|------------------------------|
| <b>UG Level Courses</b><br>(3 and 4 Year Degree Programme) | Bachelor of Commerce (Hons.) |
|                                                            | Bachelor of Commerce         |
| <b>PG Level Courses</b><br>(2 Year Degree Programme)       | M.com                        |

## 2.8. Faculty of Management Studies

At AKS University, the Faculty of Management Studies is dedicated to delivering excellence in management education. With a robust emphasis on research, innovation, high-quality publications, and corporate consultancy, we have established ourselves as a leading institution in the field.





## **Programs Designed for Success**

Our comprehensive portfolio includes BBA (H), MBA, and Ph.D. programs, all designed to equip students with the skills and knowledge essential for successful careers in the corporate sector. Whether students are embarking on their academic journey or seeking to advance their careers, our programs provide an ideal platform for professional growth.

## **Proven Track Record of Success**

With a long-standing reputation for educational excellence and a strong placement record, the Faculty of Management Studies at AKS University is the preferred choice for aspiring professionals. Our community of successful alumni has made significant contributions to top companies across various industries, reinforcing our commitment to quality education.

## **Flexible Learning Opportunities**

We offer a diverse array of programs tailored to accommodate varying interests and career objectives, allowing students the flexibility to select a path that aligns with their aspirations. Whether specializing in a specific area or exploring multiple facets of management, our programs lay a solid foundation for growth and success.

- BBA (Bachelor of Business Administration) (with Two Specializations)
- MBA (Master of Business Administration) (with Five Specializations)
- Ph.D. (Research Programmes)

### **2.1.9. Faculty of Social Sciences & Humanities**

Social work is an interdisciplinary field that explores the lives and experiences of socially vulnerable populations. A central focus is the investigation of the sources and consequences of social problems at micro, meso, and macro levels. The relevance of social work lies particularly in the analysis of various interventions designed to prevent or alleviate these issues. This field encompasses organizational and professional research, examining how social work is structured and implemented.



At the Faculty of Social Sciences & Humanities, we take pride in our student-centered approach, which provides flexibility and support for each student to craft their own educational journey. Students can combine programs and certificates across different disciplines, pursue double-major degree programs, or engage in unique interdisciplinary experiences in areas such as Work and Employment, Indigenous Studies, and Race & Ethnicity.

As part of the AKS University family, students not only receive a high-quality education but also benefit from valuable opportunities to learn beyond the classroom. We emphasize the development of life and employment skills, including competencies in research and leadership, empowering students to address significant societal challenges.

Both undergraduate and postgraduate research opportunities are readily available within our community and abroad, alongside peer mentorship training and practical application, enhancing the overall educational experience.

Faculty of Social Sciences & Humanities also offers courses of Masters Degree in Yoga

|                        |                     |
|------------------------|---------------------|
| <b>2 Yrs</b>           | B.A.                |
| <b>2 Yrs</b>           | M.A. Yoga           |
| <b>1 Yrs</b>           | PG. diploma of yoga |
| <b>3 Yrs (Minimum)</b> | Ph.D                |

AKS University is dedicated to upholding the highest standards in the science of yoga as a comprehensive system for personal advancement. Our commitment to the practice of yoga promotes individual growth and well-being.



The yoga program we offer is designed as a holistic approach to harmonious living, catering to the diverse needs of all participants. This comprehensive system addresses various aspects of life, including physical health, mental well-being, emotional behavior, and workplace dynamics.

Central to our philosophy is the concept of awareness; practitioners are encouraged to explore and understand all dimensions of their personality through yoga. This integration of physical, mental, and emotional practices fosters a balanced lifestyle, supporting personal development and overall well-being.

#### **2.1.10. Faculty of Education**

Established in 2012, the Faculty of Education at AKS University is approved by the National Council for Teacher Education (NCTE). This co-educational institution offers a two-year B.Ed. course designed to instill professional values and enhance the learning skills of teacher educators through the development of the "4Cs": Curiosity, Creativity, Competence, and Compassion.

The Faculty of Education is dedicated to fostering quality and excellence in the training of value-oriented prospective teachers for society, equipping them with the knowledge necessary to navigate emerging areas of education in a technology-driven world.

### **2.2 Teaching Learning Process**

#### **2.2.1 Curriculum Components**

The curriculum at AKS University is designed as a comprehensive plan that outlines the teaching and learning processes required for students in various academic programs. Serving as a vital foundation of the educational structure, the curriculum encompasses clear objectives, learning outcomes, course content, study schemes, teaching methodologies, and assessment methods. In light of rapid technological advancements and the emergence of new disciplines, it is essential for the curriculum to remain dynamic, undergoing regular reviews and updates.



To fulfill its mission of nurturing the next generation of leaders, AKS University is committed to providing students with the resources necessary to explore and pursue a wide range of academic and recreational interests. The university emphasizes the development of 21st-century skills, including teamwork, problem-solving, research, time management, information synthesis, and the effective use of high-tech tools. This skill set empowers students to take charge of their own learning journey, guided by experienced faculty members.

At AKS University, exploration, creation, learning, and critical thinking are fundamental pillars of our pedagogical approach. We excel in delivering an education grounded in systematic pedagogical principles, which manifest as practical learning experiences. This prepares students to pursue career paths that align with their interests and expertise. Our Project-Based Learning approach integrates real-life contexts and technology into the curriculum, encouraging students to become independent thinkers, critical analysts, and lifelong learners.

Our thoughtfully designed modules aim to produce employable graduates equipped to excel in industries, businesses, and public service sectors. We achieve this by enhancing their skill sets related to the integration and application of technical concepts, interactive development, creative problem-solving, and innovative methodologies.

Additionally, our curriculum emphasizes personality development, fostering a commitment to a sustainable environment through the incorporation of human values, yoga, and meditation. This holistic approach aims to enhance students' employability while building their confidence, innovative skills, and creativity.

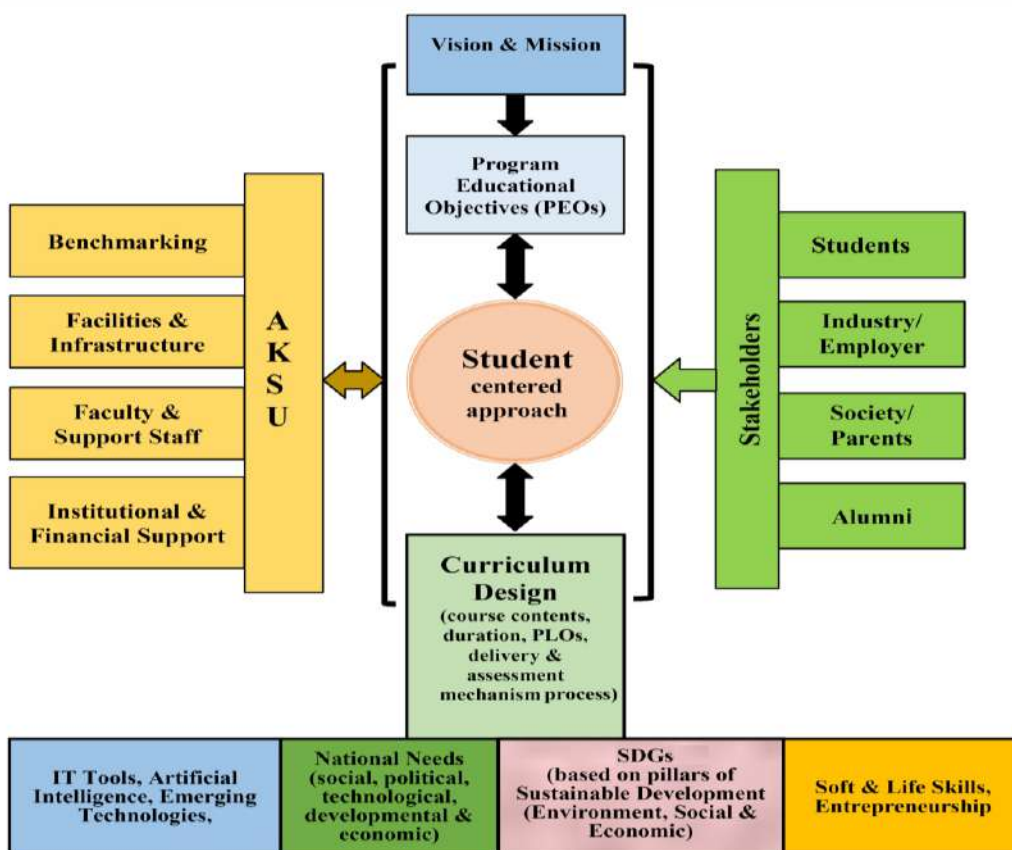
### **2.2.2 Outcome Based Education (OBE) – Curriculum Development Framework**

Outcome-Based Education (OBE) is a teaching and learning approach that prioritizes the specific competencies students are expected to achieve by the conclusion of their educational programs. This student-centered framework emphasizes not only



what students should know but also what they should be able to do as a result of their learning experiences.

In the context of OBE, curriculum development involves the integration of program objectives and learning outcomes that reflect feedback from various stakeholders, ensuring alignment with the institution's Vision and Mission. This systematic approach facilitates a more effective educational experience, ultimately equipping students with the skills and knowledge necessary for success in their respective fields.



## 2.3 Teaching-Learning & Evaluation System

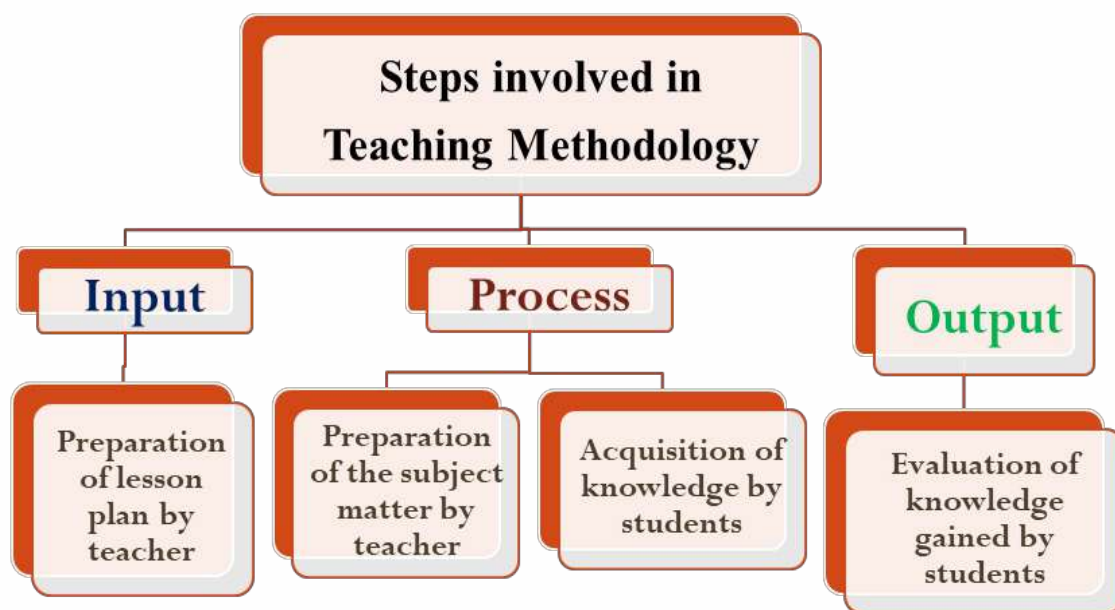
AKS University implements multiple and continuous activity evaluations to ensure a high standard of education and academic integrity. This commitment is



communicated through various information dissemination mechanisms, including the college calendar, which is distributed to all students and faculty members at the beginning of each academic session.

The Controller of Examinations (CoE) oversees all internal examinations and coordinates the logistics for university-wide assessments. To enhance student learning, AKSU has developed an innovative Teaching-Learning and Evaluation process designed to effectively measure the knowledge and skills acquired at different levels of its programs.

The university operates under the premise that evaluation is fundamental to examination and that examinations are critical for comprehensive assessment. As a result, AKSU has instituted a diverse array of evaluation processes that run parallel to curriculum delivery, thereby ensuring a robust framework for academic assessment.



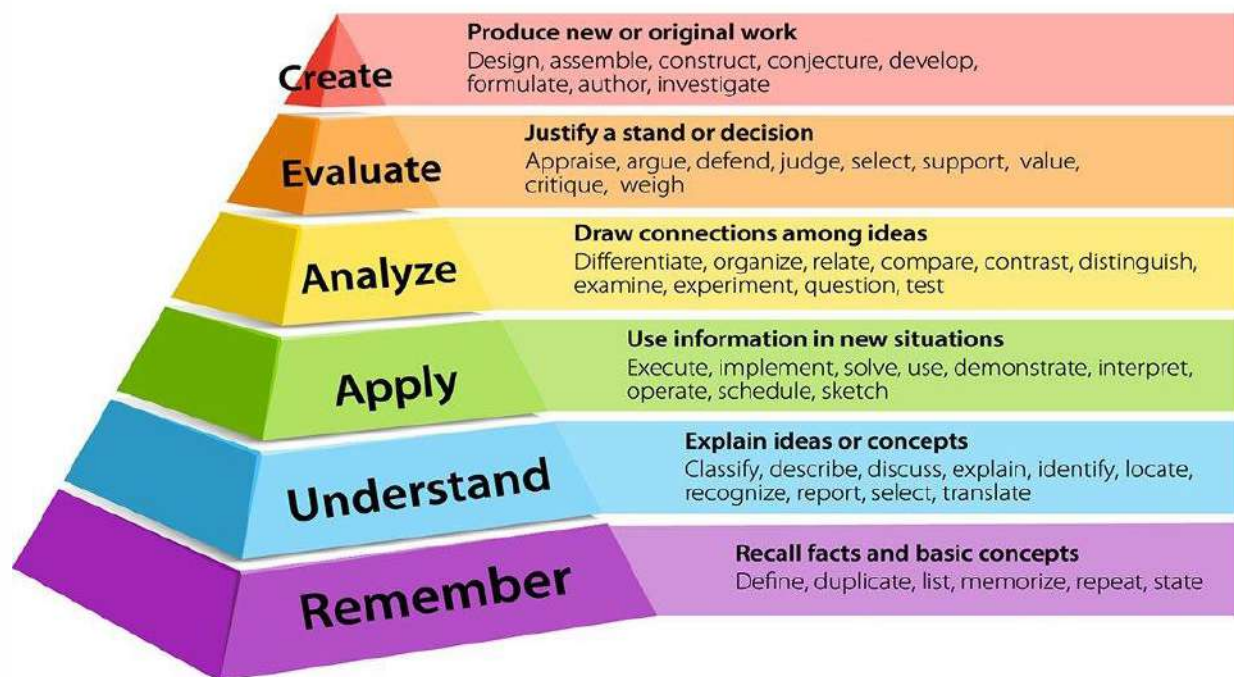
Teaching to students by adopting Bloom's Taxonomy helps the students to

- Understand various levels of learning
- Apply the Knowledge to innovate and create
- Meet out the learning objectives





# Bloom's Taxonomy



## 2.4 Strategies of AKSU

- AKSU has developed an integrated academic support model to enhance the quality of higher education for undergraduate and postgraduate students.
- The adoption of the Choice-Based Credit System (CBCS) provides a student-centric approach that facilitates diverse learning opportunities and clearly defined learning goals.
- The CBCS curriculum fosters 360-degree student development through Core Courses, Discipline-Specific Courses, Generic Electives, University Fundamental Skills Courses, and non-credited courses focused on Environmental Consciousness, Green Credits, and Yoga & Meditation.
- We employ Bloom's Taxonomy-Based Evaluation to promote higher-order thinking skills among students, progressing from basic to advanced cognitive abilities.



- Our Team-Centric Exercises and Key Point Pedagogy provide effective learning models for slow learners.
- Project-Based Learning enhances critical thinking, communication, and cooperation skills while fostering innovations in experiential learning through practical study.
- We emphasize blended and multidisciplinary learning to uncover its transformative potential at AKSU.
- Industry-academia interaction is strengthened through MOUs and collaborations with organizations like Synergy University, Moscow; MUSE Mantra, USA; PRSI, India; Symmetrix; the World Wildlife Fund; Mandideep Industrial Association; IBM; I-Nurture; and Wiley-IIML, with educational tours providing direct industry exposure.
- We apply SWOT analysis across all educational aspects to address societal expectations and ensure institutional accountability.
- Our methods for generating employability skills, internships, and placements groom students to become highly organized individuals ready for responsible positions.
- We enhance quality through best practices in library services.
- Our initiatives adhere to the university's vision, mission, and core values.
- Personality development and communication skills training prepare students for roles in reputable organizations, utilizing their knowledge and skills for societal betterment.
- Technical and professional competency mapping educates students to leverage interpersonal skills for organizational success.
- Through NSS, NCC, and UCC, students engage in social activities that encourage significant contributions to global research efforts.
- Our state-of-the-art infrastructure and laboratories provide students with hands-on experience with the latest technologies.



## 2.5 Mentorship Model

At AKS University, we believe that mentoring is an invaluable experience that plays a crucial role in the growth and development of all participants. Establishing effective mentor-mentee relationships is fundamental and requires creating a safe, supportive environment that fosters trust, goal-setting, and collaborative problem-solving.

To enhance our students' academic and personal development, we assign a faculty mentor to each student. Each faculty mentor is responsible for guiding a group of 30 students throughout their entire academic tenure at AKSU. This structured mentoring program ensures that students receive consistent support and personalized guidance, empowering them to navigate their educational journey successfully.



At AKS University, we emphasize the collaborative nature of mentoring, where both students and their mentors share the responsibility for fostering productive and rewarding relationships. Each party plays a crucial role in the success of the mentoring process.

For students, mentors serve as invaluable guides throughout their academic journey. They offer both professional and personal advice, providing constructive



feedback on various aspects of career development, including writing, teaching, and overall career design. Mentors assist students in balancing their professional aspirations with personal commitments, offering emotional support and encouragement during challenging times. This partnership is integral to the holistic development of our students, helping them navigate their educational experiences with confidence and resilience.



## **3 Research Development and Innovations**

### **3.1 Brief Summary of Research, Innovations, and Extension**

In 2021-22, AKS University Satna made significant strides in research, innovation, and community extension, emphasizing industry collaboration and societal impact. The university established dedicated research centers focusing on biotechnology, renewable energy, and sustainable agriculture, supporting projects with real-world applications and securing grants for cutting-edge studies. Faculty and students contributed to numerous publications in reputed journals, while collaborative projects with industry partners strengthened the relevance and applicability of their research. Innovation was further fueled by the development of prototypes in fields such as water conservation, eco-friendly materials, and AI-driven technologies, showcased in university-led exhibitions. Extension activities were integral to AKS University's mission, with initiatives like rural education programs, health awareness camps, and skill development workshops benefiting surrounding communities. These efforts not only bolstered the university's academic footprint but also instilled a strong sense of social responsibility in students, who actively participated in these outreach programs. Through these efforts in research, innovation, and community service, AKS University underscored its commitment to fostering knowledge, innovation, and societal well-being in 2021-22.

### **3.2 Research Projects**

#### **3.2.1 Internally funded Research Projects**

In 2021-22, AKS University Satna promoted a culture of research by internally funding a series of impactful research projects across various disciplines. These projects aimed to advance knowledge and innovation in areas relevant to regional and national development. Key research themes included sustainable agriculture practices, renewable energy solutions, water management, and advanced materials. Faculty and student researchers were encouraged to pursue innovative ideas with practical applications, with funding allocated to support necessary resources, equipment, and fieldwork. This initiative not only fostered an environment



of inquiry and creativity within the university but also provided valuable research experience for students. By prioritizing internally funded projects, AKS University strengthened its commitment to addressing societal challenges through research and positioned itself as a hub for innovation and problem-solving.

### 3.2.2 Research Papers

Number of research papers published Teacherwise in the Journals as notified on UGC CARE List

| Name of Research Paper                                                                                                                | Name of Author                          | Name of Department | Name Of journal                           |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------|-------------------------------------------|
| Isolation and Molecular Identification of Strain Exhibiting Acidic Pectinase Activity from Fruit Waste                                | Virendra Kumar Pandey and Deepak Mishra | Food technology    | Asian Jr. of Microbiol. Biotech. Env. Sc. |
| Qualitative and Quantitative Phytochemical Screening and Chemical Fingerprint Analysis of Herbal Plant Phyllanthus niruri using HPTLC | R. Nigam, R. Arnold                     | Biotechnology      | Journal of scientific research            |
| Characterization of multi-trait plant growth promoting Pseudomonas aeruginosa from chickpea (Cicer arietinum) rhizosphere             | Monika Soni, Kamlesh Choure             | Biotechnology      | Journal of Applied and Natural Science    |





|                                                                                                                                                |                                                                     |               |                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------|----------------------------------------------------------|
| Comparative Metagenomic Analysis of Two Alkaline Hot Springs of Madhya Pradesh, India and Deciphering the Extremophiles for Industrial Enzymes | Kamlesh Choure, Shreyansh Parsai, Arpit Srivastava, Piyush Kant Rai | Biotechnology | Frontiers in Genetics 12                                 |
| Media Optimization for Production of Recombinant Carrier Protein (CRM197) in Escherichia coli                                                  | Shukla S and Mishra D                                               | Biotechnology | Journal of Scientific Research                           |
| Chemo profiling of Methanolic extract of Phyllanthus emblica Linn from five different localities of Vindhya region in India                    | Dubey SK, Mishra D, Khan A, Jha M.                                  | Biotechnology | Plant Archives (International Journal of Plant Research) |
| Optimization of Refolding process for production of recombinant CRM197 Protein from Escherichia coli                                           | Shukla S and Mishra D,                                              | Biotechnology | Journal of Advanced Scientific Research                  |
| Isolation and Molecular Identification of Strain Exhibiting Acidic Pectinase Activity from Fruit Waste                                         | Pandey V, Gautam S and Mishra D,                                    | Biotechnology | Asian Jr. of Microbiol. Biotech. Env. Sc.                |
| Synthesis, characterization and acoustical parameters of synthesized cu(ii)                                                                    | Dinesh Kumar Mishra                                                 | Chemistry     | International Journal of Research and Analytical         |



|                                                                                                                                                                                  |                                                                    |                       |                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------|------------------------------------------------------|
| metal complexes with 4-chlorobenzylidene.                                                                                                                                        |                                                                    |                       | Reviews (IJRAR)                                      |
| Eco-friendly Synthesis of Biologically Active Spiro Heterocycles                                                                                                                 | Dr. Shailendra Yadav                                               | Chemistry             | Eco. Env. & Cons                                     |
| Natural products as environmentally safe and green approach to combat Covid-19                                                                                                   | Dr. Shailendra Yadav                                               | Chemistry             | Current Research in Green and Sustainable Chemistry. |
| Development and Validation of RP-HPLC Method for Dissolution Drug Release of Dimethyl Fumarate Delayed Release Capsules.                                                         | Dr. Samit Kumar                                                    | Chemistry             | Analytical Chemistry Letters                         |
| Development and validation of a stability-indicating RP-HPLC method for the identification, determination of related substances and assay of dimethyl fumarate in drug substance | Dr. Samit Kumar                                                    | Chemistry             | In Annales Pharmaceutiques Françaises                |
| Chemometrics in Ascertaining Hydrogeochemical Characteristics of Coal Mine Discharge vis-à-vis Behaviour of Surface and Groundwater Resources of the                             | Nirmal Kumar, Mahendra Kumar Tiwari, Rambabu Singh and Abhay Kumar | Environmental Science | Mine Water and the Environment                       |



|                                                                                                                                           |                                                                                                             |                       |                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------|
| Mahan River Catchment Area, Central India.                                                                                                | Singh                                                                                                       |                       |                                                   |
| Net Nitrogen Oxides Reduction By Selective Non Catalytic Reduction (SNCR) Installed At Heidelbergcement India Limited, Narsingarh, Damoh. | Mahendra Kumar Tiwari and Sandeep Kumar Tiwari                                                              | Environmental Science | Anvesak                                           |
| Tree species used as Fodder in Madhya Pradesh.                                                                                            | Sikarwar, R.L.S.; Tiwari, Arjun Prasad; Garg, Arti; Sikarwar, Pooja Singh, Guruprasad, N.M. and Dubey, P.C. | Environmental Science | Jour. Non-Timber Forest Products 27 (3): 178-186. |
| Studies on Threat Status of tree species of Madhya Pradesh, India.                                                                        | Khanna, K.K.; Dubey, P.C.; Tiwari, Arjun Prasad and Sikarwar, R.L.S.                                        | Environmental Science | Indian Forester 147(2): 137-140.                  |
| Distribution and Conservation of Terminalia coronata (Stapf) Gere & Boatwr., in India.                                                    | Singh, Kaushal, Sikarwar, R.L.S. and Mishra, Deepak                                                         | Environmental Science | Indian Forester 147 (12): 1204-1207.              |
| Modeling and Optimization of VEAM of 10% B4C/al Metal Matrix                                                                              | Pankaj K Shrivastava                                                                                        | Mechanical            | Engineering Research Express                      |



|                                                                                       |                                                                                   |          |                                                             |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|-------------------------------------------------------------|
| Composite using ANN-SCA Approach                                                      |                                                                                   |          |                                                             |
| An overview of Lagerstroemia speciosa                                                 | Madhu Gupta, Shikha Singh, Neha Goel, Prabhakar Singh Tiwari, Surya Prakash Gupta | PHARMACY | European Chemical Bulletin                                  |
| Nanosponge Drug Delivery System in Skin Care Medical Products: A Comprehensive review | Priya Diwedi, Evneet Kaur Bhatia, Durgesh Kumari Gupta, Surya Prakash Gupta       | PHARMACY | Journal of population therapeutic and clinical Pharmacology |

### 3.2.3 Books & Book Chapters

Number of books and chapters in edited volumes published Department and teacherwise during the year is detailed below.

| Name of Department | Name of Author                                                           | Publisher                     | Name of Book/Book Chapter                                                                          |
|--------------------|--------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------|
| Agri. Engg. & Food | Virendra Pandey                                                          | Textbook of Food Microbiology |                                                                                                    |
| Agriculture        | R.L.S. Sikarwar, and Arjun Prasad Tiwari,                                |                               | Diversity of Climbing Plants in Tropical Forests of Madhya Pradesh, India.                         |
| Agriculture        | Ruchi Gupta, Ashutosh Gupta, Shampi Jain, Doomar Singh, and Neeraj Verma |                               | Chrysanthemum Production, Viral Diseases and Their Management, Virus Diseases of Ornamental Plants |
| BioTech            | Ashutosh Pandey                                                          |                               | Algal biomass harvesting for biofuel production. In                                                |



|           |                                     |                                                |                                                                                      |
|-----------|-------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------|
|           |                                     |                                                | Algal Biofuel Eds Richa Kothari, VV Pathak, and VV Tyagi.                            |
| BioTech   | Arpit Srivastava                    |                                                | Serving Life Science with Sublime Leadership of Krishna Consciousness                |
| CSE       | Dr. Akhilesh A. Wao                 |                                                | Performance Analysis of Sigmoid and Relu Activation Functions in Deep Neural Network |
| Education | Bhagwan deen                        | Shaley sanskriti netratav evam shikshak vikash |                                                                                      |
| EVS       | Sheelendra upadhyay & kuldeep singh |                                                | Effect of Pollution by Cement Industries in Trees and Crop.                          |
| GPB       | Dr. Bineeta Singh                   | Practical manual for Genetics & Plant Breeding |                                                                                      |

### 3.2.4 Patents & Copyrights

Number of Patents awarded during the years 2023-24

| Date of Award | Name of the Faculty/student author of the patent | Patent Number        | Patenet Awarding Agency |
|---------------|--------------------------------------------------|----------------------|-------------------------|
| 09/01/2023    | Sumit Pandey & Dr. Surya Prakash Gupta           | 202321040555         | Indian Patent Office    |
| 4/30/2021     | Dr. Akhilesh A. Wao                              | 202121010361         | Indian Patent Office    |
| 12/8/2021     | Dr. Pankaj K Shrivastava                         | 2021106933 (Granted) | Australian Patents      |
| 11/17/2021    | Dr. Pankaj K Shrivastava                         | 2021106599 (Granted) | Australian Patents      |



### 3.2.5 Internal Research Project

| Project Title                                                                                                                  | Name of Faculty (PI) | Department              |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|
| Descriptive study of retail food marketing in Satna MP                                                                         | Dr Kausik Mukherjee  | Business Administration |
| Study of edible oils marketing and it's market research in and around Satna MP                                                 | Dr Deepak Chaurasia  | Business Administration |
| A study of trend of the selection process in the service sector of Satna MP,                                                   | Dr Pradeep Chaurasia | Business Administration |
| Study of perceptions of consumers towards online Marketing in Vindhya region of MP,                                            | Mr Chandan Singh     | Business Administration |
| A comparison and analysis between institutional Vs non-institutional source of finance for farmers of rural Satna              | Sweeta Singh         | Business Administration |
| Empirical study of manpower management in private schools of Satna MP,                                                         | Chandan Singh        | Business Administration |
| Response of organic manure and age of seedling on growth and yield of Broccoli (brassica all Rasiya variety italica) cv. Besty | Dr. Abhishek Singh   | Horticulture            |
| Impact of organic manure on growth yield and quality of Knol Khol (Brassica oleracea Var.gongylodeL.) cv. Green Wonder         | Dr. Abhishek Singh   | Horticulture            |
| Effect of organic manure and inorganic fertilizer on growth yield and quality of Garlic (Allium sativum L.)                    | Dr. Abhishek Singh   | Horticulture            |





### 3.2.6 Seed Money

| Name of the faculty receipt of Seed Money | Name of the Project                                                                                                           |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Dr. Reni Nigam                            | Antimicrobial activity of medicinal plants found in Vindya region                                                             |
| Dr. Deepak Mishra                         | Pectinase production on fruit waste substrates                                                                                |
| Pragya Shrivatava                         | To Develop an Online Examination System for Students and Prepare an Online System for Submitting Tuition and Examination fees |
| Dr Akhilesh A. Wao                        | wireless sensor network implementation for soil moisture monitoring in smart farming                                          |
| Dr SK Pandey                              | Conservation and Promotion of Sahiwal and Gir cattle                                                                          |
| Dr Pranesh Singh Baghel                   | Evaluation of egg quality of indigenous chickens                                                                              |
| Ms Garima Singh                           | Evaluation of best practices for increasing milk yield in Sahiwal and Gir cows                                                |
| Mr. Ayodhya Prasad Pandey                 | Development of seed testing laboratory for the seed quality assessment.                                                       |
| Mr. Sanjay Lilhare                        | Contingent crop planning (CCP) for mitigating climate change on crop production                                               |
| Dr. Balaji vikram (P.I)                   | High and ultra high-Density planting of Different promising cultivars of Mango under Vindhya region of Satna M.P.             |
| Dr Rohit Omar                             | Alternate of River sand fine aggregate for Manufacture of concrete                                                            |



|                         |                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Dr. Sailendra Yadav     | Development of Mechanical Grinding Assisted Microwave Sythesizer for Synthesis of organic compounds and Its Application |
| Dr. Surya Prakash Gupta | Synthesis and Evaluation of Anti-Microbial Activity of Some Schiff's Bases of Indazole                                  |
| Dr. Surya Prakash Gupta | Analytical method development for estimation of naringin by high performance liquid chromatography                      |
| Dr. Surya Prakash Gupta | Development of Phytopharmaceuticals for Neurodegenerative Disorders                                                     |
| Dr. Gopal Garg          | Ethnomedicine and Drug Discovery from Tribal Regions                                                                    |
| Dr. Madhu Gupta         | Isolation and Characterization of Novel Compounds from Endemic Plant Species                                            |
| Dr. Rama Shukla         | A Fault prediction Analysis of 3 phase induction Motor                                                                  |
| Dr. Sudha Agarwal       | Cosmic acceleration of the Universe in modify theory of gravity via observational constraints                           |
| Mr. Virendra Pandey     | Development and quality evaluation of lemon Squash                                                                      |
| Dr. Anil Kumar Mishra   | Physiotherapy management of acute osteoarthritis patient                                                                |

### 3.3 Conferences/workshop/Conclave/Expo organized at AKS University Satna

List of Conferences Seminars Workshops Attended by the the teaching Faculty Members

| Name of Conferences Seminars Workshops                       | Organising Date | Name of Department |
|--------------------------------------------------------------|-----------------|--------------------|
| Interactive International Workshop on "Research Methodology" | 4-8 Apr 2022    | Management         |



|                                                                                                                             |                |                         |
|-----------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|
| Anxiety, Stress Management & Image Management                                                                               | 1-Apr-22       | All                     |
| Plant genetic Engineering                                                                                                   | 12-16 Jul 2021 | BioTech/Pharma          |
| Immunobiological Techniques                                                                                                 | 26-30 Jul 2021 | BioTech/Pharma          |
| Recombinant DNA Technology                                                                                                  | 2-6 Aug 2021   | BioTech/Pharma          |
| Applications on Labour Laws and New Labour's codes in India                                                                 | 12 Jun 2022    | Management              |
| A Seminar on World Microbiome Day                                                                                           | 27 Jun 2022    |                         |
| One day Hands-on workshop on "ORGANISING MICROSOFT CAREER PROGRAM"                                                          | 16 Jun 2022    | CSIT                    |
| Industry-Academia seminar (Mining)                                                                                          | 22 Mar 2022    | Mining/Civil/Cement     |
| Online workshop on the topic "Intellectual Property Rights (IPR) Patents and Design Filing "                                | 25 Mar 2022    | Engg/Management/BioTech |
| International Conference on Emerging Trends in Artificial Intelligence and Smart Systems (THEETAS-2022)                     | 16-17 Apr 2022 | All Engg                |
| national webinar on the very crucial topic "Personality Development"                                                        | 19 Feb 2022    | All                     |
| National Mathematics Day                                                                                                    | 22 Dec 2021    | Basic Sci               |
| "Drugs and Diseases Don't Discriminate"                                                                                     | 28 Dec 2021    | Pharma                  |
| “An Overview of Electroanalytical Carbon-Based Nanosensors: The Current Status and The Future Prospect”                     | 21 Dec 2021    | Basic Sci               |
| Ecofriendly Techniques using Hydrotrophy, Mixed Hydrotrophy and Mixed Solvency Concept”                                     | 20 Dec 2021    | BioTech/Pharma          |
| International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BREECH 2021), | 1-4 Dec 2021   | All Ag/ BioTech         |



|                                                                                                                                            |                   |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------|
| A Training Program on *Two- and Three-Dimensional Building Modelling Using Archi CAD And AutoCAD*                                          | 29 Nov-5 Dec 2021 | Civil                    |
| 4th International Conference on Recent Trends in Business and Entrepreneurial Ventures'.                                                   | 27-28 Nov 2021    | Management/Commorce      |
| Pharma Orientation Ceremony - 2021'                                                                                                        | 11 Oct 2021       | Pharma                   |
| National Seminar on the topic "Implementation of National Education Policy- 2020: Research and Innovations".                               | 19 Oct 2021       | Education/Art/Commorce   |
| 'International Conference on Bioengineering Solutions for Healthcare, Food, Energy and Environment (BSHFEE 2021)'.<br>                     | 18 Sep 2021       | BioTech/Ag               |
| "Opportunities and Challenges in Food Industries".                                                                                         | 17 Sep 2021       | Food Tech                |
| A workshop on *'Mandala Art'*                                                                                                              | 16 Sep 2021       | Art/Ecdueation           |
| 7th Workshop on "Recombinant DNA Technology"                                                                                               | 6-10 Sep 2021     | BioTech/Pharma           |
| National webinar on the topic 'Agribusiness Opportunity for Micro Industries & Youth of Madhya Pradesh' under "Atmanirbhar Bharat Abhiyan" | 26-Aug 2021       | Ag/Management            |
| "Role of Universities in National Education Policy 2020".                                                                                  | 16 Aug 2021       | Art/Ecdueation/Basic Sci |
| 6th Workshop on "Immunobiology Techniques"                                                                                                 | 16-20 Aug 2021    | BioTech/Pharma           |
| a national conference on "Indian Startups and Our Economic Development"                                                                    | 29 Aug 2021       | Management/Commorce      |
| National Webinar On "Re-imagining Education For 21st Century Learners "                                                                    | 7 Aug 2021        | Education/Art            |



**Social Science &  
Management  
Welfare Association**

**Faculty of Management  
Studies, AKS University  
Satna (M.P.), INDIA**



## National Conference On Indian Startups and Our Economic Development



**Date** 29 August 2021, Sunday, **Time** : 11am

**Venue** AKS University, Panna Khajuraho Road  
Sher Ganj, Satna (M.P.), INDIA  
on **Google Meet**

### Chief Guest & Speakers



**Er. Anant Kumar Soni**  
Chairman & Pro Chancellor  
AKS University, Satna (M.P.)



**Prof. Dr. Harshvardhan  
Srivastava**  
Pro Vice Chancellor  
(Development) AKS University,  
Satna (M.P.)



**Prof. Dr. Bikrama Singh**  
Former Head Dept. of Economics  
& Dean of Social Science & DSW  
Magadh University, Bodhgaya, Bihar  
Advisory Board Member SSMWA



**Dr. D. Vishwakarma**  
Secretary - SSMWA  
President - IEA  
Member - IEA



**Dr. Shauli Mukherjee**  
Director & Dean- Students Affairs,  
Adamas University, Former Founder  
Principal Adamas World School &  
STEM World School Global Thought  
Leader Inspirational Speaker



**Dr. Veerendra V. Shanbhag**  
Principal  
PU College, Bhatkal,  
Uttara Kannada, Karnataka  
Advisory Board Member SSMWA



**Dr. A. William**  
Principal, Government Arts &  
Science College, TC Cross Road,  
Vanur Taluk, Villupuram, Tamil Nadu  
Advisory Board Member SSMWA



**Dr. Santosh Kumar Arsiya**  
Mahatma Gandhi Chitrakoot  
Gramodaya University,  
Chitrakoot, Satna  
Member SSMWA



**Dr. Kausik Mukherjee**  
Associate Professor (HOD)  
Faculty of Management  
AKS University, Satna (M.P.)  
Member SSMWA

### Best Paper & Presentation Award

**Registration & Last Date of Abstract : 23-08-2021**

**Last Date of Full Paper : 25-08-2021**

**Please use font Times New Roman for English and Kruti Dev 010 for Hindi**

### REGISTRATION FEES

Registration Fees - 400/-  
International Journal, ISSN : 2454-4655  
Peer Reviewed & Impact Factor 5.2  
Hard Copy - 800/-

**Social Science & Management  
Welfare Association  
Bank of Maharashtra  
Sanjeevani Nagar Garha, Jabalpur  
A/C No. - 60367026242  
IFSC Code - MAHB0001135  
Google Pay - 9770123251**

• We Provide Hard Copy of International Journal

Please Send Research Paper Published in  
International Journal ISSN : 2454-4655  
Email - ncrt2021@gmail.com

**Registration & Paper Submission Date**

Last Date of Abstract : 23-08-2021

Last Date of Full Paper : 25-08-2021

### CONTACT

Cell - 9131312045, 9770123251, 8305476707, 0761-4036611

Email - issmwa.in@gmail.com, Website - www.issmwa.com









MSME DEVELOPMENT INSTITUTE INDORE  
In Association With  
Organising Webinar on

**AGRIBUSINESS OPPORTUNITY FOR MICRO INDUSTRIES & YOUTH OF MADHYA PRADESH UNDER ATMANIRBHAR BHARAT ABHIYAN**

**Distinguished Guest**



**Sh. D.C. Sahu, IEDS**  
JT. Director/HOO  
MSME-DI, Indore



**Sh. Anant Kumar Soni**  
Pro-Chancellor  
AKS University, Satna

**Chief Speaker**



**Dr. K.V. Ramana Rao**  
Principal Scientist  
& PI-NAIF-ABI  
ICAR-CIAE, Bhopal

**Coordinator**



**Mr. Gaurav Goyal**  
Assistant Director  
MSME-DI, Indore

**Moderator**



**Dr. Harshvardhan**  
Pro-Vice Chancellor,  
(Admin)  
AKS University, Satna



**Prof. S.S. Tomar**  
Dean, Faculty of Agricultural  
Sciences & Technology,  
AKS University, Satna



**Dr. Neeraj Verma**  
Head, Agricultural Sciences,  
AKS University, Satna



**Prof. Kamlesh Choure**  
Director, CRIISD  
CEO, AKSU-Business Incubator,  
AKS University, Satna



**Shashant Pawar**  
Young Professional-I,  
NAIF-ABI,  
ICAR-CIAE, Bhopal

**Date : 26/08/2021** **Time : 3.00 pm onwards**



**AKS University, Satna**  
Sherganj, Panna Road, Satna (M.P.) Ph.: 8889207776, 8889237776




**Expert Lecture**  
by  
**Dr. Ajeet Sarathe**  
(Head, Department of Agriculture Engineering)  
**Topic : Good Manufacturing Practice in Food Industry and**  
**Mr. Virendra Pandey**  
(Department of Food Technology)  
**Topic : How Food can be used as Medicine**  
on 27th August 2021  
in **Eat Right Food Campaign, Satna**  
**Organised by : Satna Smart City Forum.**









 **AKS UNIVERSITY, SATNA**  
Sherganj, Panna Road, Satna (M.P.)

**DEPARTMENT OF B. DESIGN**

**WORKSHOP ON MANDALA ART**

**Open For All**

Date : 16 September 2021, Time : 2 pm. - 3 pm.

**R.S. Tripathi**  
Pro Vice Chancellor  
AKS University, Satna

**Dr. Harshvardhan**  
Pro Vice Chancellor  
AKS University, Satna

**Er. Anant Soni**  
Pro Chancellor & Chairman  
AKS University, Satna

**Co-ordinator**  
**Chuman Yadav**  
Department of B. Design  
AKS University, Satna

**Convener**  
**Abhinav Shrivastava**  
HOD (In Charge)  
Department of B. Design  
AKS University, Satna

  
**Diksha Singh**  
Expert  
AKS University, Satna

Registration Link : <https://forms.gle/eojrvvMG8GrMQhru6>

 **AKS University, Satna**  
Faculty of Management Studies

**Faculty of Management Studies**  
**AKS University, Satna**

 **LINCOLN** UNIVERSITY COLLEGE

and

 **ICRTBEV**  
INTERNATIONAL CONFERENCE ON RECENT TRENDS IN BUSINESS AND ENTREPRENEURIAL VENTURES 2021

**Lincoln University, Malaysia**

**4th International Conference**

**Topic:** Recent Trends in Business and Entrepreneurial Ventures

**Theme:** Role of Business Research in Changing Technological World

**DATE:** 27 - 28 November, 2021

**MODE :** virtual mode

**Website:** <http://icrtbev2021.lincoln.edu.my/>

**Note: Papers will be published please visit the website for information.**

📍 Panna Road, Sherganj, Satna, MP    ☎ 7772897776    🌐 [www.aksuniversity.ac.in/](http://www.aksuniversity.ac.in/)    📺 Follow us on: f t i



# AKS University, Satna

Department of Civil Engineering

## INDUSTRIAL TRAINING

ON

“ Two And Three  
Dimensional  
Building modelling  
using Archi CAD  
and Autocad ”

BY



**Vaanahaa Education & Innovation  
Labs Private Limited Kolkata (W.B.)**

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## AKS UNIVERSITY SATNA

Faculty of Management Studies

▶ WEB INAR

Free e-Certificate

**TOPIC : Personality Development**

**Date : 19 February 2022, Time : 12pm to 01:00pm**



Dr. Anand Singh  
Prof. Chairman and Chairman  
AKS University, Satna



Dr. Hardev Singh  
Prof. Vice Chairman  
AKS University, Satna



Dr. Kanchi Maheshwari  
HOD Faculty of Management Studies  
AKS University, Satna



Anurag Singh Panthar  
Coordinator  
Faculty of Management Studies AKSU



Priyanka Sharma  
Coordinator  
Faculty of Management Studies AKSU



Krishna Kumar Mishra  
Coordinator  
Faculty of Management Studies AKSU



Eminent Speaker

**Dr. Nitu Ghosh**

Assistant Professor  
REVA BUSINESS SCHOOL, BENGALURU







आज़ादी का  
अमृत महोत्सव



**NIPAM**  
NATIONAL IP AWARENESS MISSION




**AKS University Satna**

In Association with

**Rajiv Gandhi National Institute of  
Intellectual Property Management (RGNIPM)**

Government of India, Nagpur  
(Under National Intellectual Property Awareness Mission)

*Presents*

Online Workshop on  
**Intellectual Property Rights (IPR)  
Patents and Design Filing**

Registration Link: <https://forms.gle/hXMpsJULJqUzyPPCA>



**Expert**  
**Dr. Bharat N Suryawanshi**  
Intellectual Property Rights (IPR)  
Patent & Designs Process  
Assistant Controller of Patents & Designs  
RGNIPM, Nagpur

**Patrons**



**Dr. Anant Soni**  
Pro Chancellor and Chairman  
AKS University, Satna



**Dr. Harshwardhan**  
Pro Vice Chancellor (Dev.)  
AKS University, Satna



**Dr. R.S. Tripathi**  
Pro Vice Chancellor (Admin.)  
AKS University, Satna

**Coordinator:**



**Dr. Akhilesh A. Wadd**  
(Head)  
Department of Computer Science & Engineering

**25<sup>th</sup> March  
2022**

**11.30 AM to  
12.30 PM**

On  
**webex  
Platform**



# AKS University, Satna

Participated in a



## INTERNATIONAL CONFERENCE





**Pragya Shrivastava, Presented a Paper  
On  
Digital Mining in India**



## IQM CONNEX 2022 (EDTQ 2022)

**ERA Of Digital Technology In Quarrying The Way Forward**

**IOI Resort Putrajaya Malaysia**

**Mr. Sonu Soni**  
IT Head

**Pragya Shrivastava**  
Assistant Professor  
Department of Computer Science

**Shristi Soni and Shraddha**  
Mining Student

📍 Panna Road, Sherganj, Satna, MP

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#### 4 AKS University Achievements

AKS University is dedicated to fostering quality research that enhances knowledge and develops the capabilities of our faculty and students. We emphasize the importance of creating and sharing knowledge through the publication of research papers and the writing of books and book chapters. Publishing research is crucial for universities and academics for several reasons:

- **Accountability:** As a publicly funded institution, AKS University is accountable to the community. Publishing research ensures that findings are accessible, reinforcing the responsibility of academics to contribute meaningfully to their fields.
- **Career Advancement:** A strong publication record is often essential for tenure and academic promotions, opening doors to additional professional opportunities within academia.
- **Knowledge Sharing:** Publication enables researchers to disseminate their findings, engage in peer review, and contribute to the advancement of their disciplines. Published work serves as a valuable resource for future researchers.
- **Funding Opportunities:** Successful publications can enhance the university's visibility, potentially attracting additional funding from various sources.
- **Teaching Positions:** Faculty members with a strong publication record are often favored for teaching positions, highlighting the significance of research in educational roles.
- **Higher Education Access:** Research publications can enhance students' applications to reputable higher education programs, both domestically and internationally.
- **Scholarship Competitiveness:** Published papers in peer-reviewed journals strengthen scholarship applications, particularly for master's and Ph.D. programs.
- **Research and Writing Skills Development:** The research and writing processes help students deepen their understanding of topics while honing their expertise.



- **Employment Differentiation:** A strong publication record can distinguish graduates in the competitive job market, providing them with a significant advantage.

Through our commitment to quality research and publication, AKS University aims to empower our faculty and students to contribute to their fields and advance their careers while enhancing the academic reputation of the university.

#### **4.1 Faculty Development Program**

Faculty Development Programs (FDPs) play a crucial role in enhancing the teaching-learning process and promoting academic excellence. These programs provide faculty members with opportunities to update their knowledge on the latest advancements in their fields, learn innovative teaching methodologies, and explore new pedagogical strategies. By facilitating networking among educators from various institutions, FDPs foster the exchange of ideas and experiences, creating a collaborative academic environment. Topics typically covered include curriculum development, research methodologies, and technology-integrated learning, ensuring that faculty are equipped to engage students effectively and enhance their educational experience. Led by experts from renowned institutions and industry professionals, these programs focus on developing research skills and capabilities, further contributing to the academic growth of both faculty and students. By participating in FDPs, faculty members at AKS University are empowered to deliver high-quality education, which significantly impacts the institution's reputation and the overall development of its student body. This commitment to continuous professional development underscores the university's mission to achieve excellence in education, preparing faculty to meet the evolving demands of the academic landscape. The scenario due to Covid-19, there are many things going to change continuously in teaching and learning processes are chiged. Through these initiatives, AKS University reinforces its dedication to fostering a culture of lifelong learning and innovation.



| Department | Title                                               | Date                     |
|------------|-----------------------------------------------------|--------------------------|
| IQAC       | Faculty development program on virtual lab          | 03-08-2022 to 07-08-2022 |
| IQAC       | Faculty development program on research methodology | 18-04-2022 to 22-04-2022 |



Faculty development program on Virtual Lab

# AKS UNIVERSITY

SATNA (MP)

(Nodal Centre for Virtual Labs, IIT Delhi)

**Department of Computer Sciences Organizes One Week FDP**

## Virtual Labs

03- 07 August 2021 Time- 09:30 AM - 4:30 PM

Remote access to Labs  
in various disciplines  
of Science and Engineering

Virtual  
Labs

An MoE, Govt of India Initiative  
An Initiative of MoE,  
Under the National Mission  
on Education through ICT

**Virtual Lab Expert, IIT Delhi**

Mr. Prateek Sharma

---

**Mr. Shivam Sundarani**

---

**Expert - AKS UNIVERSITY**

Dr. Akhilesh A. Wao

---

Mr. Vinendra Tiwari

---

**Nodal Coordinator**

**Dr. Akhilesh A. Wao**

Department of Computer Science  
and Engineering, FE&T, AKSU





**Important Dates:** Last date for receipt of applications: 17-April-2022

**Chief-Patron:**

Er. Anant Kumar Soni  
Chairman & Pro-Chancellor  
AKS University, Satna (M.P.)

**Patrons:**

Dr. R.S. Tripathi  
In-Charge VC & Pro VC (Administration)  
AKS University, Satna (M.P.)

Dr. Harshvardhan Shrivastava  
Dean & Pro VC (Development)  
AKS University, Satna (M.P.)

**Co-Ordinators & Moderator :**

Dr. Pradeep Chaurasia  
Assistant Professor  
Faculty of Management Studies  
AKS University, Satna (M.P.)

Mr. Pramod Kumar Dwivedi  
Assistant Professor  
Faculty of Management Studies  
AKS University, Satna (M.P.)

Mr. Anurag Singh Parihar  
Assistant Professor  
Faculty of Management Studies  
AKS University, Satna (M.P.)

Er. Prakash Kumar Sen  
Assistant Professor  
Faculty of Management Studies  
AKS University, Satna (M.P.)



University established by M.P. Legislative Act No. 46 of 2011, duly recognized by UGC/AIR-1 (2018)

**AKS University, Satna (M.P.)**  
(The University with Difference)

One Week  
Faculty Development Programme  
on  
**"Research Methodology"**

To be held on  
18-April-2022 to 22-April-2022

Organized By  
**Faculty of Management Studies**



**Convener**  
Dr. Kausik Mukherjee  
Associate Professor & Head  
Faculty of Management Studies  
AKS University, Satna (M.P.)

**About the AKS University:**

AKS University is primed to fulfill its mission of developing & arming human resources with modern applied knowledge & competencies, harnessing knowledge for addressing multifarious local, regional & national challenges including creating skilled manpower to support the leapfrogging economic growth of India, enhancing engineering competitiveness through technology-development & technology-induction, enhancing agricultural productivity through Bio-technology & other innovations, environmental conservation through innovative technology & approaches. AKS University considers the paradigm of Think Global & Act Local as a key enabler in furtherance of its mission, vision and objectives, and towards this end, AKS is keenly exploring linkages with selected national & global Universities and Institutions of repute so as to maximize knowledge-exchange, joint research, faculty & student exchange, winning programs, sharing best practices in higher education space; and thereby emerge as a globally relevant institution in this interconnected world of today & future.

With emergence of many private Universities in India, a hope in the form of AKS University Satna emerged in the year 2011.



## 4.2 Academic-Industrial Partnerships (MoU)

The MoUs signed by AKS University in 2021-22 reflect its dedication to fostering academic excellence, enhancing research capabilities, and contributing to community welfare. These partnerships are instrumental in achieving the university's vision of creating a holistic educational environment and promoting innovation and sustainability.

| <b>Name of the organization (MOU/Collaboration signed)</b> | <b>Duration</b>        | <b>Purpose of MOU/Collaboration</b>                                                                                                                                                                                        | <b>List the actual activities under each MOU year-wise</b>                                                                                                                                                     |
|------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Union Yoga Ayurveda                                        | 03 Years               | Skill Development Training                                                                                                                                                                                                 | Skill Development and Training, Faculty Development, Internships and Projects                                                                                                                                  |
| Aegis I-Net Pvt. Ltd                                       | Valid Until Terminated | AKS is RedHat Academy for Skill Development and Training, Faculty Development, Internships and Projects, Research and Innovation, Career Support and Placement, Community and Outreach Programs, Monitoring and Evaluation | 90 students from the BCA and B. Tech CSE programs. The workshop aimed to provide students with a comprehensive understanding of computer networking concepts, practical skills, and the latest industry trends |
| Merck High End Skill Development Centre                    | 01 Year                | Hand on training of students                                                                                                                                                                                               | virtual training of the selected candidates                                                                                                                                                                    |
| IP Intellect Services (IPIS)                               | 01 Year                | Intellectual Property Rights activities, including patents, trademarks, copyrights, and design registration.                                                                                                               | 5 candidates selected for the 3 months training and internship                                                                                                                                                 |
| Mprex                                                      | 05 Years               | Internship in CRO                                                                                                                                                                                                          | 6 student internship and                                                                                                                                                                                       |



|                                     |                        |                                                                                                                                                                         |                                                         |
|-------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Healthcare Pvt Ltd                  |                        |                                                                                                                                                                         | hands on training                                       |
| Grinson Phytoherb Pvt Limited       | 02 Years               | Student Internship and training related to food and nutraceutical products                                                                                              | 6 student internship and hands on training for 3 months |
| Molechem Lifesciences Pvt Ltd       | 01 Year                | Internship in Pharmaceutical marketing company                                                                                                                          | 6 student internship and hands on training              |
| Invitox R and D Institute           | 02 Years               | Preclinical laboratory work and the offering of student internships                                                                                                     | 4 student internship and hands on training              |
| Aster Analytical Research Institute | 02 Years               | Work related to analytical instruments and the provision of student internships are key components in fostering hands-on experience and skill development for students. | 8 student internship and hands on training for 3 months |
| IIT Delhi - Virtual Lab             | Valid Until Terminated | Virtual Lab for Engineering Students of Many subject                                                                                                                    | FDP<br>Student Lab Work in each semester                |

#### 4.3 Infrastructure & Resource Development

In the academic year 2021-22, AKS University continued to make strategic investments in infrastructure and resource development to enhance the quality of education and research. The university provided students and faculty with state-of-the-art laboratories across various disciplines, such as biotechnology, engineering, and environmental science. These advanced labs enabled hands-on learning and facilitated research in critical areas, including agriculture, renewable energy, and water management.



The university further expanded its library resources to support academic pursuits and research activities. Students and faculty had access to an extensive collection of books, journals, and e-resources, along with departmental libraries and an evolving e-library system. This enriched learning environment has been instrumental in fostering a robust research culture and academic excellence.

To support a technology-driven learning approach, AKS University invested in ICT-enabled classrooms and modern teaching aids, promoting interactive learning experiences. For the agriculture faculty, experimental fields and polyhouses were established, offering practical exposure to crop production and soil management techniques essential for students in agriculture studies.

Adapting to the challenges posed by COVID-19, AKS University developed an in-house system to conduct online classes, internal assessments, and end-semester examinations.

Through these infrastructure enhancements and resource expansions, AKS University reaffirmed its commitment to providing an innovative, hands-on educational environment that supports both academic and professional growth, positioning itself as a modern, student-focused institution.

#### **4.4 Student Support and Progression**

In 2021-22, AKS University maintained a comprehensive range of student support services to foster academic success, personal development, and career readiness. The university's initiatives included mentorship programs, counseling services, and skill development activities aimed at guiding students throughout their academic journey. Faculty mentors provided personalized support in course selection, research opportunities, and career advice, ensuring students had a clear pathway to achieve their goals.

The university continued to prioritize mental health and well-being, offering counseling services to help students manage academic stress and personal challenges. To enhance employability, AKS University organized workshops and training sessions on



communication skills, interview techniques, and resume building. Industry-aligned internships and placement programs connected students with top companies, increasing their job prospects after graduation.

Additionally, AKS University supported holistic development through extracurricular activities, such as sports, cultural events, and student clubs, creating a well-rounded university experience. These efforts underscored the university's commitment to student success, providing students with the resources, guidance, and support necessary to excel academically and prepare for professional careers. The 2021-22 academic year highlighted AKS University's dedication to nurturing skilled, confident, and socially responsible graduates.

#### 4.4.1 Value Added and Skill Development Course

| Department                                                                     | Mode of the Course-offered by the HEI or Online | Contact hours of course | No. Of Students |
|--------------------------------------------------------------------------------|-------------------------------------------------|-------------------------|-----------------|
| B Tech. Electrical Engineering<br>Electrical AUTOCAD                           | offline                                         | 30                      | 23              |
| B Tech. Electrical Engineering<br>Electrical Machine Maintenance and Testing   | offline                                         | 30                      | 23              |
| B. Tech. Mining Engineering<br>Geostatistical Tools Application in Mine Design | offline                                         | 30                      | 61              |
| B Tech Civil Engineering Repair and Rehabilitation of Structures               | offline                                         | 30                      | 31              |
| Master of Business Application Indian Startups and Economic Development        | online                                          | 30                      | 71              |
| B Tech Biotechnology Bioformulation of Fungal and Bacterial Bio-Control Agents | offline                                         | 30                      | 72              |





|                                                          |         |    |    |
|----------------------------------------------------------|---------|----|----|
| B Tech Biotechnology Immunological Techniques            | offline | 30 | 72 |
| B Tech Biotechnology Recombinant DNA Technology          | offline | 30 | 72 |
| B Tech Biotechnology Plant Genetic Engineering           | offline | 30 | 72 |
| Environmental Science Environmental Quality & Management | offline | 30 | 14 |



## 5 Institutional Values

### 5.1 Brief Summary of Institutional Values and Best Practices

AKS University is committed to fostering an environment that upholds values of integrity, inclusiveness, excellence, and social responsibility. The university's core values reflect a dedication to holistic education that balances academic rigor with character-building, preparing students to contribute positively to society. AKS University places a strong emphasis on sustainability, innovation, and community engagement, ensuring that students and faculty are not only gaining knowledge but also applying it in ways that benefit their communities and the environment.

1. **Ethics and Integrity:** AKS University promotes ethical conduct and integrity across all levels. This includes policies that discourage academic malpractices and encourage transparency in academic and administrative processes.
2. **Environmental Sustainability:** The university implements green practices, including water conservation, waste management, and energy-saving initiatives. The establishment of experimental fields and polyhouses supports sustainable agricultural practices, emphasizing environmental responsibility.
3. **Community Engagement:** Through extension and outreach activities, AKS University fosters a culture of social responsibility. Programs that reach out to local communities, such as agricultural workshops, health camps, and educational support initiatives, allow students and faculty to address real-world challenges.
4. **Skill Development and Employability:** Recognizing the importance of preparing students for the workforce, AKS University offers regular workshops, internships, and industry collaborations. These activities focus on building practical skills, communication, and leadership qualities essential for professional success.
5. **Inclusive and Supportive Campus Environment:** The university promotes inclusivity through various support services, including counseling, mentorship programs, and dedicated support for differently-abled students. It also fosters a culture of diversity, respect, and tolerance, ensuring a welcoming environment for students from various backgrounds.



6. **ICT and Digital Resources:** AKS University emphasizes the integration of ICT in education, providing digital classrooms, e-libraries, and online learning platforms to facilitate modern, accessible education.

## 5.2 Institutional Distinctiveness

AKS University stands out for its commitment to practical, hands-on education, especially in agriculture and engineering. As a university located in a region with a strong agricultural foundation, it leverages its expertise to address the needs of rural and agrarian communities through research, extension activities, and community support. The following distinct features highlight AKS University's unique approach to education and community service:

1. **Focus on Agriculture and Sustainable Development:** AKS University's programs in agriculture, soil and water conservation, and renewable energy are tailored to address the challenges of sustainable development in rural areas. The university's experimental fields, polyhouses, and research in sustainable farming practices position it as a leader in agricultural education.
2. **Integration of Traditional and Modern Knowledge:** The university combines traditional knowledge systems, especially in agriculture, with modern scientific approaches. This unique blend helps students understand sustainable practices that are relevant to local communities while staying updated with global technological advances.
3. **Community-Centric Approach:** AKS University prioritizes community welfare by offering various training programs and extension activities in agriculture, health, and education. This approach ensures that knowledge generated within the university has a direct, positive impact on surrounding communities.
4. **Innovative Learning Environment:** The university's emphasis on experiential learning, combined with ICT-enabled classrooms and an extensive digital library, creates an innovative learning environment. Students are encouraged to engage in practical problem-solving, research projects, and internships, preparing them to face real-world challenges effectively.



## 6 Achievements of AKS University Satna

### 6.1 Award & Recognition

Number of awards received for research/innovations by the institution/teachers/research scholars/students

| Name of the awardee       | Name of the award                                 | Name of the awarding body                                                       | Category of award (innovation/technology transfer etc) |
|---------------------------|---------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|
| Dr. Ashwini A Wao         | Star Performer Award                              | Career College Bhopal, FDP Under, ugc paramarsh scheme                          | Innovation                                             |
| Dr. B. K. Mishra          | Dr. P. N. Bose Award                              | The Indian Mining and Engineering Journal Diamond Jubilee Award Function (2021) | Innovation                                             |
| Virendra Kumar pandey     | MP Young Scientist award                          | MPCST Bhopal                                                                    | Innovation                                             |
| Sheelendra Kumar Upadhyay | Scientist associate award                         | Astha Foundation Meerut (U.P)                                                   | Innovation                                             |
| Sheelendra Kumar Upadhyay | Innovative Environmentalist Award                 | Asian Biological Research Foundation (ABRF), Prayagraj (India)                  | Innovation                                             |
| Sheelendra Kumar Upadhyay | Lal Bahadur Shastri global award for Biodiversity | Global Environment social Association                                           | Innovation                                             |



## 6.2 Faculty invited as an External Expert

### i. Department of Environment

Faculty Name: Dr. R.L. Shikarvar

| Year           | Name of University/Company                                            | Activities                                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| February, 2021 | CSIR- National Botanical Research Institute, Lucknow (Uttar Pradesh)  | Received “Pushpangadan Biodiversity Access and Benefit Sharing Award-2020” given by Dr. P. Pushpangadan Charitable Society & CSIR- National Botanical Research Institute, Lucknow                              |
| March, 2021    | CSIR- National Botanical Research Institute, Lucknow (Uttar Pradesh)  | Chaired Session in XLIII All India Botanical Conference of Indian Botanical Society<br>Delivered Lecture on “Plant Science, Plants, Plantations and Conservation of Biodiversity in Ancient Indian Scriptures” |
| October, 2021  | Department of Botany, Jai Narain Vyas University, Jodhpur (Rajasthan) | Chaired Session in XLIV All India Botanical Conference of Indian Botanical Society<br>Delivered Invited Lecture on “Conservation of Biodiversity in Ancient Indian Scriptures”                                 |
| November,      | Chhattisgarh State                                                    | As Resource Person in Conservation                                                                                                                                                                             |



|      |                                               |                                                                                              |
|------|-----------------------------------------------|----------------------------------------------------------------------------------------------|
| 2021 | Biodiversity Board, New Raipur (Chhattisgarh) | Assessment and Management Prioritization Workshop on Medicinal Plants of Chhattisgarh State. |
|------|-----------------------------------------------|----------------------------------------------------------------------------------------------|

## ii. Department of Biotechnology

Faculty Name: Dr. Ashwini A. Wao, Professor, Department of Biotechnology

| Year | Name of University/Company                        | Activities                                                                                                 |
|------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 2021 | AKSU Satna, Mahakaushal Vigyan Parishad, Jabalpur | Coordinator and Organizing Member Panel Discussion on Science Technology and Innovation (STIP) 2020 Policy |

## iii. Department of Computer Science Engineering

Faculty Name: Dr. Akhilesh A. Wao, Associate Professor

| Name of Expert                                                          | Designation    | Objective of visit and his contribution                                                                                                                                                                                                   |
|-------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Expert Session | "Characteristics of Successful Entrepreneurs" - 17 Feb 2021, 4-Week "Women Entrepreneurship Development Program (WEDP), by MANIT-ROLTA Incubation Centre, Sponsored by NSTEDB DST, Govt. of India. National<br>15th Feb – 13th March 2021 |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Expert Session | "Who is an Entrepreneur & Charms of Being an entrepreneur" - 18 Feb 2021, 4-Week "Women Entrepreneurship Development Program (WEDP), by MANIT-ROLTA Incubation Centre, Sponsored by NSTEDB DST, Govt. of India. National                  |





|                                                                         |                                               |                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                         |                                               | 15th Feb – 13th March 2021                                                                                                                                                                                                                                        |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Expert Session                                | <p>“Soft Skill Development &amp; Information Seeking” on 24 Feb 2021.</p> <p>4-Week "Women Entrepreneurship Development Program (WEDP), by MANIT-ROLTA Incubation Centre, Sponsored by NSTEDB DST, Govt. of India. National</p> <p>15th Feb – 13th March 2021</p> |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Invited Talk                                  | Delivered an expert session on “Exploring Research Horizons in Computer Science and Application “as a Guest Speaker under the SAGE Talk series, On 22nd October 2021                                                                                              |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Expert Session                                | Deliver an expert session on “Computer Networking “, Government Polytechnique College, Satna on 4-2-21                                                                                                                                                            |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Member of Technical Programme Committee (TPC) | Member of Technical Programme Committee (TPC) in the IEEE International Conference on Technology, Research & Innovation for Betterment of Society (TRIBES-2021) held during December 17th-19th, 2021 at IIIT Naya Raipur, Chhattisgarh, India.                    |
| Dr. Akhilesh A. Wao, Associate Professor, Associate Dean and Head CS/IT | Programme Committee Member                    | Virtual, 8 <sup>th</sup> International conference on signal and image processing (SIPRO 2022), March 20-22, Sydney, Australia                                                                                                                                     |



#### iv. Department of Mining Engineering,

Faculty Name: Dr. B. K. Mishra

| Name of university/college/ Research institute | Activities                               |
|------------------------------------------------|------------------------------------------|
| Jajang iron ore mine, Odisha                   | GET, Technical Training, Resource person |

Faculty Name: **Prof AK Mittal**

| Year            | Name of University/Company | Activities                                                |
|-----------------|----------------------------|-----------------------------------------------------------|
| August, 2021    | JSW, Odisha                | For six days Induction course of New entrants as engineer |
| September, 2021 | NMDC, Bachel, Bastar       | Six days Refresher course of Technical Staff              |
| December, 2021  | NCL, Singrauli, MP         | Paper presentation in ICOMS 2021                          |



### 6.3 List of Experts Visited/Associated with The University Department of

#### i. Pharmaceutical Science

| Name of Expert        | Designation                                                                            | Objective of visit and his contribution |
|-----------------------|----------------------------------------------------------------------------------------|-----------------------------------------|
| Dr. Hardeep S. Saluja | Professor, Southwestern Oklahoma state University weatherford, Oklahoma, United States | Expert Talk                             |
| Dr. Satyam Tripathi   | Director, Union Yoga, Ayurveda Pvt. Ltd. Singapore                                     | Expert Talk                             |

#### ii. Department of Agriculture Science & Technology

| Name of Expert | Designation                       | Objective of visit and his contribution |
|----------------|-----------------------------------|-----------------------------------------|
| Prof. T. Singh | Professor Agronomy & Horticulture | As Expert Public Selection community    |

#### iii. Department of Biotechnology

| Name of Expert    | Designation                                           | Objective of visit and his contribution |
|-------------------|-------------------------------------------------------|-----------------------------------------|
| Prof. P. S. Bisen | Professor Emeritus, Jiwaji University, Gwalior, India | Expert Lecture                          |



## 6.4 STUDENTS ACHIEVEMENTS

**6.4.1** Students qualifying in state national international level examinations during the last year

| <b>Name of the qualifying student</b> | <b>Level of Exam</b> | <b>Name of compitetive examination</b> |
|---------------------------------------|----------------------|----------------------------------------|
| Sai suman chintham                    | National             | GATE                                   |
| Shivam singh                          | National             | GATE                                   |
| Barrenkala mahesh                     | National             | GATE                                   |
| Vijay kumar                           | National             | GATE                                   |
| Girish kumar kariya                   | National             | GATE                                   |
| Murali krishna<br>kuchanpally         | National             | GATE                                   |
| Vijjagiri prudhvi teja                | National             | GATE                                   |
| Ankit tiwari                          | National             | GPAT                                   |

### 5.4.2 Soft Skill, LCS, Life Skill, Awareness

| <b>Name of the student</b> | <b>Name of the event</b>                | <b>Date of Event</b> | <b>Team / Individual</b> | <b>inter-University / state / National/ International</b> | <b>Position secured</b>     |
|----------------------------|-----------------------------------------|----------------------|--------------------------|-----------------------------------------------------------|-----------------------------|
| Tulsi Tripathi             | Solo Song / Swar Sarita Sangeet Samaroh | 13/11/2021           | Individual               | Inter University                                          | Certificate of Appreciation |



|                                                 |                                                                                                                        |                               |            |                     |                                                                                             |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|---------------------|---------------------------------------------------------------------------------------------|
| Naincy<br>Namdeo<br>Muskan Gupta<br>Pranshu Sen | Wall Painiting<br>Competiton at<br>Maharaja<br>Martand<br>Singh Judev<br>White Tigar<br>Safari and<br>Zoo<br>Mukundpur | 04/10/2021                    | Team       | Inter<br>University | Third Rank                                                                                  |
| Prateek Nigam<br>Ashutosh<br>Singh              | Debate<br>Competition /<br>II The India<br>Debate<br>Competition<br>2021                                               | 17/12/2021                    | Team       | National            | Runner up                                                                                   |
| Prateek Nigam                                   | AIU National<br>Level 11th<br>Indian<br>Student<br>Parliament<br>(Bhartiya<br>Chhatra<br>Sansad)                       | 23/09/2021<br>-<br>28/09/2021 | Individual | National            | Represented<br>Madhya<br>Pradesh<br>State as Top<br>Five<br>Speaker at<br>National<br>Level |
| Prateek Nigam                                   | Intercollege<br>Lecture<br>(Speech)<br>Competition /<br>15th National                                                  | 19/10/2021<br>-<br>23/10/2021 | Individual | National            | Third Rank                                                                                  |



|               |                                                                               |                         |            |          |            |
|---------------|-------------------------------------------------------------------------------|-------------------------|------------|----------|------------|
|               | Science Popularization Workshop "JIGYASA - 2021"                              |                         |            |          |            |
| Prateek Nigam | Speech Competition/ National Youth Parliament 2021-22 organized by on 2021-22 | 22/12/2021 - 23/12/2021 | Individual | National | First Rank |

**AKS University, Satna**

**Cultural Directorate**

**Congratulations**

**Prateek Nigam**  
MCA

Participated in  
11th Annual edition of Bharatiya Chhatra Sansad (Indian Students' Parliament)

**23-28 September, 2021**

Organized By-  
Union Ministry of Youth Affairs & Sports,  
Government of India & A.U.U.

Panna Road, Sherganj, Satna, MP | 7772897776 | www.aksuniversity.ac.in/ | Follow us on: [Social Media Icons]

**AKS UNIVERSITY, SATNA**

*Congratulations!*

**PRATEEK NIGAM**  
MCA

Secured  
First Position in the District level Youth 2022.

Organized by  
The Ministry of Youth Affairs and Sports, Government of India  
on 19 February 2022.

Panna Road, Sherganj, Satna, M.P. | www.aksuniversity.ac.in/ | Follow us on: [Social Media Icons]





**6.4.3 Number of awards/medals won by students for outstanding performance in cultural activities at inter-university/state/national/international events, award for a team event should be counted as one)**

| <b>Name of the award/ Medal</b> | <b>Team / Individual</b> | <b>Inter-university / State / National / International</b> | <b>Name of the event</b>                                                                                                                                                                                                               |
|---------------------------------|--------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Winner                          | Individual               | Inter University                                           | Singing Competiton/<br>Independence Day Talent Show<br>2021 organized by R.P. Square<br>Dance Studio, Satna on 15<br>August 2021                                                                                                       |
| First Rank                      | Individual               | National                                                   | Speech Competition/ National<br>Youth Parliament 2021-22<br>organized By Neharu Yuva<br>Kendra, Satna (M.P.) Ministry<br>of Youth Affairs and Sports,<br>Government of India) on 2021-<br>22                                           |
| Third Rank                      | Team                     | Inter University                                           | Wall Painiting Competiton at<br>Maharaja Martand Singh Judev<br>White Tigar Safari and Zoo<br>Mukundpur Organized By M.P.<br>Tigar Foundation Society<br>Bhopal and Forest Department<br>Govt. of Madhya Pradesh on 04<br>October 2021 |
| Third Rank                      | Individual               | National                                                   | Intercollege Lecture (Speech)<br>Competition / 15th National                                                                                                                                                                           |



|                                              |            |                  |                                                                                                                                                                                                                   |
|----------------------------------------------|------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              |            |                  | Science Popularization Workshop "JIGYASA -2021" ORGANIZED BY MP Council of Science and Technology, Mahakaushal Vigyan Parishad and Rani Durgavati University Jabalpur from 19-23 October 2021                     |
| Certificate of Appreciation                  | Individual | Inter University | Solo Song / Swar Sarita Sangeet Samaroh organized by Anubhuti Samiti Nagoud, Satna (M.P.) on 13 November 2021                                                                                                     |
| Certificate of Appreciation                  | Individual | Inter University | International Women's Day organized by Office Collector and Mahila Bal Vikas Department Satna (MP.) on 08 March 2021                                                                                              |
| Runnerup                                     | Team       | National         | Debate Competition / CII The India We Want Debate Competition 2021 organized by Confederation of Indian Industry (CII) under the aegis of Association of Indian Universities (AIU) New Delhi, on 17 December 2021 |
| Represented Madhya Pradesh State as Top Five | Individual | National         | AIU National Level 11th Indian Student Parliament (Bhartiya Chhatra Sansad) Organized by MIT School of Government,                                                                                                |



|                              |  |  |                                                                                                                   |
|------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------|
| Speaker at<br>National Level |  |  | Pune under the aegis of<br>Association of Indian<br>Universities (AIU) New Delhi,<br>from September 23 - 28, 2021 |
|------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------|

#### 6.5 Remark of Eminent personality visited to AKS University

| Date       | Visitors<br>Name                  | Designation                                                                 | Feedback                                                                                                                                                                                                                                     |
|------------|-----------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12/02/2021 | Susmita<br>Mukherjee              |                                                                             | It was a wonderful visit to AKSU. I loved<br>the interaction with the young people. I<br>also visited the bio chemistry lab.<br><br>Wish all success to AKS University                                                                       |
| 10/03/2021 | Dharmguru<br>Dr. Dinesh<br>Pandit | MS, FICS                                                                    | I am very much pleased and surprised to<br>visit this AKS University, Satna and see<br>its Biological lab having certain research<br>product. I am sure under confidential<br>vision the university provide great<br>education contribution. |
| 16/08/2021 | Prof. Bharat<br>Sharan Singh      | Chairman<br>M.P. Private<br>University,<br>Regulatory<br>Commission, Bhopal | Today on 16/08/2021, visited AKS<br>University. What role can Private<br>Universities can play in the effective<br>implementation of the National Education<br>Policy have been discussed in detail and<br>a plan have been made.            |
| 01/11/2021 | Pukhraj<br>Nenival                | Regional Controller<br>of Mines Indian<br>Bureau of Mines,                  | Privileged to visit the Campos on<br>National Mining Day. Very glad to<br>observe the blend of eminent faculties of                                                                                                                          |



|            |               |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|---------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |               | Jabalpur                                                        | theory from field experts. The University is growing very fast. I wish all the best in all its future endeavor.                                                                                                                                                                                                                                                                                                                             |
| 01/11/2021 | Robert Simen  | Assistant Controller of Mines, Indian Bureau of Mines, Jabalpur | It is a great pleasure to the part of the National Mining Day. The faculty were well experienced kind & friendly. Overall, a memorable experience of visiting this great university.                                                                                                                                                                                                                                                        |
| 18/12/2021 | Prabhat Kumar | DG, DGMS, Dhanbad, Govt. of India, MoLE                         | AKS University Appeared to me to be an excellent centre of knowledge and study, specially, I appreciate the mining engineering department for its efforts to groom the students or good engineers and persons. I congratulate the faculty and the establishment for their enormous contribution to the development of this region and country and wish them all the best. May God bless them and provide all the resources for the endeavor |
| 18/12/2021 | Prof FN Singh | Director, Indian Institute of Technology, Patna                 | AKS University is unique in the sense of educational ecosystem having more than 8000 students from graduate to Ph.D. I am happy to see the progress of students for learning the lab/ library all is nicely planned and executed. The dedication and devotion of faculty members are excellent. I am sure this university will rise to highest level of academic excellence in terms of teaching and research. I wish all success.          |



## 7 Extension Outreach Activity

Extension and outreach activities at AKS University, Satna, aim to bridge the gap between academic knowledge and practical, community-centered applications. These activities foster community engagement, provide real-world learning experiences for students, and contribute to the socio-economic development of the surrounding regions. Here's an overview of how AKS University approaches extension and outreach activities:

### 7.1 NCC, NSS, and UCC Activities

Engaging in NCC and NSS inspires students to actively contribute to the advancement of the nation while nurturing a deep sense of patriotic dedication. The NCC/NSS initiatives cultivate a profound respect for the myriad differences in religion, language, culture, ethnicity, lifestyle, and habitat, fostering a strong sentiment of national solidarity and communal harmony. These undertakings enhance students' capacity to actively engage in community development and various other social initiatives.

AKS University has initiated the National Cadet Corps (NCC) program with the authorization of the relevant authority, utilizing its internal resources. Currently, NCC cadets are engaged in mandatory institutional training and are also required to participate in a minimum of two annual Combined Annual Training Camps (CATC) held off-campus.

During these camps, cadets receive comprehensive training in drill exercises, weapon handling, physical fitness routines, yoga practice, as well as engaging in sports and competitive games. The training also includes firing practice and participation in cultural activities. Furthermore, students attend theory sessions focusing on cultivating leadership skills, fostering personal development, and learning about health and hygiene. These sessions are conducted by experts from various fields.

NCC cadets actively participate in community service, such as organizing blood donation drives, facilitating tree plantation initiatives, promoting awareness campaigns like "Clean India



Undertaking campus cleanup drives, and contributing to nearby orphanages and elderly care homes through donations and visits.

The NSS division at AKS University commenced its operations with independent funding in the year 2018. Currently, the AKS University NSS boasts a membership of 210 volunteers, comprising 115 male and 95 female students. The overarching goal of the NSS remains the "Holistic enhancement of student personalities through active community engagement." An esteemed senior professor leads this NSS unit, responsible for the voluntary selection of students to partake in NSS activities.

AKS University's NSS volunteers actively engaged in routine social service endeavors, encompassing initiatives such as organizing blood donation camps, conducting health and environmental awareness campaigns, planting trees, advocating for the Clean India campaign, undertaking campus cleanliness drives, facilitating self-employment programs, and extending support to local orphanages and mental health facilities. Here is a glimpse of the various activities accomplished by the NSS students at AKS University:

AKS University Cadet Corps (UCC): In accordance with regulatory guidelines, the availability of seats for participation in the National Cadet Corps (NCC) and National Service Scheme (NSS) at the university is limited. In order to expand the opportunities for students to engage in such enriching activities, AKS University has introduced the University Cadet Corps (UCC) Unit. This initiative was launched in the year 2018

The primary objective, vision, and mission of UCC align closely with those of the NCC. The UCC Unit is generously funded by the university, ensuring that student participation comes at no cost. The leadership of this unit is entrusted to a retired captain from the Indian defense services.

As of now, a total of 60 students have enthusiastically enrolled in the AKS UCC. These students actively partake in activities akin to those of the NCC and NSS. The range of activities .





| Name of the activity                                     | Organising unit/ Forum/ collaborating agency                  | Date       | Number of students participated in such activities |
|----------------------------------------------------------|---------------------------------------------------------------|------------|----------------------------------------------------|
| Awareness on traffic rules and Traffic Control Duty      | AKS university (NCC) and Satna Traffic Police                 | 27-04-2022 | 7                                                  |
| Awareness program on NCC and Annual Training Camp (ATC)  | AKS university (NCC) and 3 MP BN NCC Rewa                     | 27-04-2022 | 13                                                 |
| NCC awareness program                                    | AKS university (NCC) and AKS University                       | 04-04-2022 | 17                                                 |
| Swachha Bharat Abhiyan                                   | AKS university (NCC) and 3 MP BN NCC Rewa                     | 23-02-2022 | 10                                                 |
| Awareness program on NCC                                 | AKS university (NCC) and 3 MP BN NCC Rewa                     | 27-11-2021 | 5                                                  |
| Covid 19 Awareness programme                             | National Academy of Sciences, Bhopal and AKS University Satna | 10-08-2021 | 45                                                 |
| Independents Day Camp (IDC)                              | AKS university (NCC) and MoD New Delhi                        | 01-08-2021 | 1                                                  |
| Social Distancing App for Public by AKS University Satna | AKS university (NSS) and AKS University                       | 18-07-2021 | 15                                                 |
| COMBINED ANNUAL TRAINING Camp                            | AKS university (NCC) and 3 MP BN NCC Rewa                     | 03-07-2021 | 17                                                 |
| Awareness of Plantation Program                          | AKS university (NCC) and 3 MP BN NCC Rewa                     | 05-06-2021 | 17                                                 |
| Awareness Programme about Corona                         | AKS university (NSS) and AKS University                       | 23-05-2021 | 65                                                 |
| Corona Medicine Distribution                             | AKS university (NSS) and District Hospital Satna              | 17-05-2021 | 95                                                 |
| Vaccination & Mask Distribution                          | AKS university (NSS) and District Hospital Satna              | 12-05-2021 | 155                                                |
| Food and Water Distribution during Corona Time           | AKS university (NSS) and AKS University                       | 10-04-2021 | 160                                                |



### 7.1.1 CAMPS ATTENDED BY AKS UNIVERSITY NCC SW CADETS

| Year | Date        | Place          | Name Of Bataliyan | No. Of Participants |
|------|-------------|----------------|-------------------|---------------------|
| 2021 | 4-6/02/2021 | Aks University | 3 Mp Bn Ncc Rewa  | 17                  |



### 7.1.2 TRAKKING CAMP

| Date          | Place  | Name Of Bataliyan                  | No. Of Participants |
|---------------|--------|------------------------------------|---------------------|
| 16-22/11/2021 | Sikkim | By Ncc Darjeeling And Sikkim Group | 05                  |

### 7.1.3 ALL INDIA GIRLS TREKKING CAMP (AIGT CAMP)

| Date          | Place | Name Of Bataliyan                                                                                                     | No. of Participants |
|---------------|-------|-----------------------------------------------------------------------------------------------------------------------|---------------------|
| 17-24/11/2021 | Ajmer | 11 Raj Bn Ncc, Ajmer (Raj) Under the Aegis of Ncc Group Headquarters, Udaipur & 7 Ncc Director Ate Rajasthan at Ajmer | 02                  |

### 7.1.4 REPUBLIC DAY PARED

NCC Cadets Sw of Aks University Participated on Republic Day Pared As Detailed Below

| Date       | Place                        | Name Of Bataliyan | No. Of Participants |
|------------|------------------------------|-------------------|---------------------|
| 26/01/2021 | Distric Police Parade Ground | Aksu Ncc          | 24                  |





### 7.1.5 NCC DAY CELEBRATION

| Year | Date        | Place          | Name of Bataliyan | No. Of Participants |
|------|-------------|----------------|-------------------|---------------------|
| 2021 | 27/11/ 2021 | Aks University | Ncc Cadets Sw     | 23                  |



### STATUE CLEANING of Satna Sity

|      |            |                  |                                       |    |
|------|------------|------------------|---------------------------------------|----|
| 2021 | 25/09/2021 | Madhavagarh Fort | NCC Cadets Sd&Sw<br>of AKS University | 14 |
|------|------------|------------------|---------------------------------------|----|

### AHID DIVASH PROGRAM

|      |            |                   |                                         |    |
|------|------------|-------------------|-----------------------------------------|----|
| 2021 | 30/01/2021 | AKS<br>UNIVERSITY | NCC CADETS SD & SW OF AKS<br>UNIVERSITY | 18 |
|------|------------|-------------------|-----------------------------------------|----|





## 7.2 . NSS Club

### NSS (National Service Scheme) Unit at AKS University, Satna

The NSS (National Service Scheme) Unit at AKS University, Satna, stands as a beacon of community engagement and social responsibility. Through its diverse range of extension activities, the NSS Unit embodies the university's commitment to fostering holistic development among students while making tangible contributions to society.

Extension activities organized by the NSS Unit serve as bridges between the university and the local community, addressing pressing social issues, promoting sustainable development, and empowering individuals through education and awareness. These activities encompass a wide spectrum, including environmental conservation efforts like tree plantation drives, cleanliness campaigns to promote hygiene, health awareness programs focusing on diseases like breast cancer or AIDS, and educational initiatives aimed at enhancing literacy and vocational skills among underprivileged communities.

The NSS Unit at AKS University Satna not only encourages active participation from students but also collaborates closely with faculty members, local NGOs, government agencies, and community leaders to maximize the impact of its initiatives. By nurturing



a spirit of volunteerism and civic duty, these extension activities not only enrich the learning experience of students but also nurture responsible citizenship and empathy towards societal needs.

| Date       | Name of Activity              | Place of activity   | No. of students | Detail of Activity                                                                                                                                                                                                                                                                                                            |
|------------|-------------------------------|---------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08.03.2021 | Women's day Celebration       | Collectrate Satna   | 27              | NSS cadet has participated in program organized by Mahila Bal Vikash and Anupma foundation. There is need of geneder equality ant saving girls child to maintain the proper ratio. Womens protection and drive against women violence in socity must be looked.                                                               |
| 13.04.2021 | Dr. Bhim Rao Ambedkar Jayanti | AKSU campus C-Block | 23              | In the occasion of Dr. Bhim Rao Ambedkar Jayanti, student of NSS organized awareness program about constitution and fundamental duties and rights to citizen.                                                                                                                                                                 |
| 15.07.2021 | स्वतंत्रता दिवस की परेड       | AKSU campus         | 25              | NSS cadet has participated in Independece day pared as AKSU ground and parcipated in different activities like sports and cultural act.                                                                                                                                                                                       |
| 14.09.2021 | विश्व हिंदी दिवस              | AKSU campus         | 12              | A sangothi was organized in the occasion of Vishav Hindi Divash, in which NSS students Participated and expressed their views and also being motivated by many eminent persons.                                                                                                                                               |
| 22.09.2021 | NSS Day Celebration           | AKSU campus         | 40              | NSS Day Celebration was organized in cental hall of AKSU in Chairman ship of Pro chancellor of university in which NSS officer Incharge presented annual report of NSS and motivated to student to take part in National building activity. During this many event like cleanness ant plantation activity was also organized. |



### 7.3. Cultural Club -Cultural Activities at the University

The Cultural Directorate at AKS University in Satna stands as: -

A pivotal hub for the preservation and enrichment of cultural and archaeological heritage in the local and surrounding areas. This directorate is committed to fostering the cultural development of students through diverse avenues such as workshops, training programs, and competitions. Its primary dedication lies in preparing students for diverse realms of arts and culture.

In pursuit of this goal, the Cultural Directorate emphasizes the development of practical skills and the acquisition of a comprehensive knowledge base. The central objective is to nurture creativity and its expressive manifestation within the collaborative context of a group. Actively engaged, the Cultural Directorate promotes various genres of performing arts, including Classical, Traditional, Folk, and Tribal forms in the fields of Music, Dance, Drama, and Fine Arts.

To further support student artists, different clubs have been established, and selected individuals are offered stipends, reinforcing the commitment to cultivate and encourage artistic talents.



Students Practicing in Cultural Directorate of AKS University



Within AKS University cultural directorate thrives with the sole purpose of delving into and preparing students for a diverse range of cultural engagements. This hub orchestrates a multitude of events through its distinct centres, each designed to foster cultural exploration and expression.

- Society for Dramatic Art
- Centre for Fine Arts, Music, and Short Films
- Club for Photography

The Dramatic Society is dedicated to arranging cultural events for students at both the intercollegiate and intercollegiate levels. Annually, the society hosts intercollegiate cultural competition aimed at promoting creative expression among students. Additionally, students are actively motivated to engage in intercollegiate cultural programs such as "Spondan." Notably, our students consistently take part in interuniversity zonal cultural festivals and youth festivals, showcasing their talents and enthusiasm. The below photographs showing some of the cultural activities performing by the AKS University students.



## 8. Best Practices at AKS University

### 8.1. Research and Innovation

To leverage the expertise of our faculty, AKS University has launched a comprehensive Research and Development (R&D) program that integrates scientific and industrial consultancy. This initiative underscores the university's commitment to fostering innovation through collaborative research across diverse domains, including engineering, basic and applied sciences, and management, to develop holistic solutions for industrial challenges.

Within a short span, AKS University has successfully undertaken and completed several consultancy projects for Central Public Sector Undertakings (CPSUs) and private sector companies. To further strengthen our research ecosystem, the university is introducing a support program aimed at empowering young researchers. Under this initiative, each researcher will receive financial assistance, enabling them to make significant contributions to their respective fields.

Below is a summary of the research activities carried out by our faculty, organized by department. These efforts reflect the university's focus on advancing knowledge and providing practical solutions that address real-world challenges.

#### 8.1.1. Faculty of Basic Science

- The Department of Chemistry at AKS University has achieved significant breakthroughs through its Green Chemistry Lab, developing two innovative products from waste materials. Patents have been filed for these exceptional technologies. Below is an overview of these products:
- **Eco-Friendly Paint from Agricultural Waste:**  
The lab has formulated an environmentally sustainable paint using discarded plant leaves and other agricultural by-products. This paint is completely free from hazardous chemicals, ensuring safety for users and the environment. In addition to being durable and cost-effective, it is suitable for both indoor and outdoor applications, making it a versatile and



sustainable alternative to conventional paints.

- **Plastic Waste-to-Fuel Converter:**

Another remarkable innovation is a converter capable of transforming waste plastic into liquid fuel oil. The process yields **900 milliliters of liquid fuel** from every **1 kilogram of plastic waste**. This fuel can be blended with diesel at a **70:30 ratio (diesel to plastic oil)** and used effectively in diesel engines and vehicles. This technology not only offers a sustainable solution for plastic waste management but also contributes to the circular economy by producing an alternative fuel source.

- These developments highlight AKS University's commitment to green technology, sustainability, and innovation, further reinforcing its mission to address environmental challenges through research and applied science.



**Preparation of Eco-Friendly Paint and Extraction of Fuel  
Oil in Green Chemistry Lab**

### **8.2.2. Faculty of Agriculture Science and Technology**

#### **i. Instructional Farm/ Research Farm**

The university has developed a well-equipped instructional farm spanning over 100 acres, featuring advanced facilities and modern irrigation systems, including sprinkler and drip irrigation integrated with fertigation for horticultural crops. To enhance hands-on learning, several instructional units have been established, such as the Seed



Production Unit, Crop Cafeteria, Hi-Tech Horticulture, Integrated Farming System, Instructional Dairy Farm, Vermicomposting Unit, Mushroom Cultivation, and Horticulture Nursery Management. These units provide students with practical exposure and foster innovation in agricultural practices.

#### i. Seed Production Programme

Under the Experiential Learning Program (ELP), the university has launched a seed production initiative, where students are allocated land to cultivate key **Kharif and Rabi crops** using advanced agricultural practices. For the past four years, this program has successfully focused on producing high-quality seeds of improved crop varieties across both seasons.

The seeds produced during the **Kharif and Rabi seasons** are distributed to **adopted farmers** in Rural Agricultural Work Experience (RAWE) villages. Any surplus seeds are supplied to **farmers from neighboring villages**, ensuring access to high-quality seeds for those in need. This initiative not only enhances students' practical knowledge but also contributes to the agricultural productivity of the local community.

#### Seed Production Program (Agronomy)

#### iii. Crop Cafeteria

University has separate crop cafeteria of Kharif, Rabi and Horticulture crops in which improved high yielding varieties of Kharif and Rabi crops were grown in AKS University Research Farm since last 11 years. The purpose of crop cafeteria is to teach the UG and PG students about the important characteristics of various high yielding varieties of kharif and rabi crops including horticultural crops. Farmers of surrounding areas, RAWE village adopted farmers and extension workers have also visited crop cafeteria site and appreciated very much





### Academic year 2021-22

| Year    | Season | Name of Crop                                                                            |
|---------|--------|-----------------------------------------------------------------------------------------|
| 2021-22 | Kharif | Soybean, Green gram, Black gram, Niger, Sesame, Maize, Pigeon pea, Intercropping, Paddy |
|         | Rabi   | Linseed, Chick pea, Barley, Lenti, Wheat                                                |

#### iv. Hitech Horticulture

Under Faculty of Agriculture Science and Technology, University has developed two poly houses i.e. poly house-I (80m x 45m) and small (23mx14m) poly house-II for conducting Hands- on-training Horticulture crop research including M.Sc. (Ag) Horticulture research experiments, (Roses, Gerbera, Carnation) and exotic vegetable crops (Broccoli, Red cabbage, Chinese cabbage, Lettuce, Cucumber, Sponge guard etc.). These poly houses have also been used for, training of extension workers and Farmers. entrepreneurship development among the rural unemployed youth and also increasing income of farmers. Students have grown successfully Broccoli, Roses, Capsicum (Green, yellow and red) and bottle gourd.



View of Exotic Vegetable crops floriculture growing in Poly House of Faculty of Agriculture Science and Technology





- **Organic Farming**

Beside imparting the teaching and practicals among the students Department of Animal Science and Fisheries through its trainings and demonstrations to visitors it has its concerns to enhance farmers' skills and knowledge, promote sustainable agriculture practices, increase productivity and efficiency, improve livelihoods and income opportunities, and support national food security and self-sufficiency goals. Dairy farming is a significant contributor to India's rural economy, with over 70% of dairy producers being small-scale farmers. AKS Instructional dairy farms is focused on breed improvement (e.g., Gir, Sahiwal), nutrition and feeding management, milking and milk processing techniques, animal health and hygiene and entrepreneurship and business management.



**A view of milk processing in Animal Science Lab**



**A View of Fisheries Tank at Integrated Farming System unit**



- **Fish Farm -**

Fishery sector occupies an important place in the socio-economic development of the country. It is a fast-growing sector in India, which provides nutrition and food security to a large population of the country besides providing income and employment to a large population of our country.

There are three main phases of fish farming: Fingerling, Rearing and Fattening. Each of these phases is composed of its peculiarities, requiring special handling and care for each of them.

AKS University fish pond is established with a length of 20-meter length, 15-meter width and 5-meter depth with the total water held at 3-meter level. The pond is spread over 0.03-hectare land with the tarpoline sheet placed at bottom and raised over borders to top to prevent water percolation.

- **Organic Farm**

University has demarcated 15 acres of land for performing organic farming (Organic farming block). All the crop residue, cattle wastes, Horticultural crops waste and mandi wastes (vegetables and fruit wastes) are used in preparing compost. Organic insecticides, neem-based kernels (neem oil and neem cakes), *fasal sanjivani*, *Amrat pani* are being successfully produced and are being used in growing of rice, Mung bean, wheat gram fodder crops urad and all vegetables in kharif and rabi season. Organic insecticides developed in the dairy unit are used in organic farming unit of AKS University and also supplied to the RAWE adopted farmers who are performing organic farming.

- **Vermi Compost unit**

University has established Vermicompost unit nearby dairy farm. This unit has more than 30 pits equipped also with vermin wash unit producing more than 150 ton of vermin compost and same is used in M.Sc thesis experiments of Agronomy and Horticulture poly houses and also in organic farming unit.



Vermi-compost unit Faculty of Agriculture Science and Technology

- **Organic insecticides**

Organic Farming unit is also preparing organic insecticides i.e. Fasal sanjivani using cow urine and other materials which is successfully used in all crops (Horticulture and Field crops) for protecting from insects/ pests and diseases. University has also supplied these materials to

the interested farmers of RAWA adopted villages for protecting their crops from insect/ pest and diseases.

- b. Mushroom Cultivation and Training center**

Faculty of Agriculture Science and Technology along with Faculty of Life Science Biotechnology Department develop a Mushroom cultivation and training center in the AKS University. The objective of this center is to develop new and cost effective techniques for mushroom cultivation, which will help farmer and unemployed youth for self employment and develop new entrepreneurship in rural area of Satna district. Faculty has decided to run a 7 days Training program including hands-on training related to mushroom cultivation and spawn production for different species mushroom (Oyster and Button mushroom). Interested farmers and young unemployed youth will be trained to start their own business.



#### **Student Activities in Mushroom cultivation Unit**

#### **8.2.4. Other Research activities for Condition of Satna**

The Faculty of Agricultural Science and Technology initiated research programs tailored to the specific local conditions of Satna. These programs encompass technology development in agriculture and related domains. The overarching goal is to create and disseminate adaptable technologies that can enhance agricultural production and productivity across all crop types cultivated in the Satna district.

##### **i. Collection and Assessment of Germplasm:**

A diverse range of germplasm from various horticultural field crops such as turmeric, ginger, cowpea, brinjal, chillies, tomato, bottle gourd, smooth gourd, ridge gourd, amaranthus, as well as staple crops like wheat, rice, maize, moong bean, urd bean, pea, soybean, mustard, chickpea, and arhar has been gathered from State Agriculture



Universities and ICAR Institutes. These germplasm samples are currently being cultivated in the fields for the purpose of evaluation and screening. The ultimate aim is to identify and develop high-yielding varieties of these crops specifically suited for the Vindhya region.

### **ii. Introducing Novel Crops to Enrich Crop Variety**

The Vindhya region has conventionally focused on cultivating a limited set of traditional kharif crops including paddy, moong bean, urid beans, pigeon pea, sesame, soybean, and maize, as well as rabi crops such as wheat, barley, mustard, chickpea, and lentil. Recognizing the need to expand crop diversity and improve farmers' profitability in the Vindhya region, AKS University launched a research initiative titled "Enhancing Crop Diversity through the Introduction of New Crops in the Vindhya Region" spanning from 2013 to 2022.

### **iii. Creation of Fruit Progeny Orchard (Parent Orchard)**

The Faculty of Agricultural Science and Technology has successfully initiated progeny orchards for a variety of fruits including mango, litchi, guava, beal, Aonla, and olive. This endeavor involves the cultivation of grafts and root cuttings aimed at producing disease-free planting materials. These materials will not only be supplied to farmers for commercial cultivation but will also be used in educational instruction for student.





### 8.2.6 Herbal gardens of AKS University

The utilization of plants for medicinal purposes dates back to periods long before recorded history. India, recognized as a rich repository of medicinal plants, relies heavily on its vast forests, which serve as the primary source of numerous medicinal and aromatic flora. The use of medicinal plants for treatment is valued for its safety, often accompanied by little to no side effects. The beauty lies in the alignment of these remedies with nature, presenting a significant advantage.

Herbal gardens, designated spaces within larger gardens dedicated to cultivating medicinal plants, serve as vital resources. Recognizing the importance of medicinal plants in various academic disciplines such as Agriculture, Pharmacy, and Life Science, AKS University has established an herbal garden on its campus. Beyond academic considerations, the herbal garden aims to raise awareness about the conservation and traditional applications of herbs and medicinal plants. It serves as an educational space for students, farmers, and other enthusiasts to learn how to identify, appreciate, and preserve these invaluable plants.

There are more than 90 species found in the herbal garden of AKS University. Some important plants are *Abroma agusta* (L.) L.f., *Abrus precatorius* L., *Aloe vera* (L.) Burm.f., *Artemisia annua* L., *Aristolochia indica* L., *Asparagus racemosus* Willd., *Cleome amboinicus* Lour., *Commiphora wightii* (Arn.) Bhandari, *Curcuma caesia*





Roxb., *Cymbopogon flexuosus* (Nees ex Steud.) W. Watson, *Cynanchum acidum* (Roxb.) Oken, *Gymnema sylvestre* (Retz.) R.Br. ex Sm., *Hellenia, speciosa* (J. Koenig) S.R. Dutta, *Hydrocotyle sibthorpioides* Lam., *Alpinia galangal* (L.) Wild., *Mentha piperita* L., *Ocimum gratissimum* L., *Ocimum tenuiflorum* L., *Paederia foetida* L., *Amomum subulatum* Roxb., *Tinospora cordifolia* (Willd.) Hook.f. & Thomson, *Vincetoxicum indicum* (Burm.f.) Mabb., *Withania somnifera* (L.) Dunal etc.



### 8.2.7. Medicinal and Aromatic Plants Demonstrative Unit

The connection between plants and human's dates back to the dawn of civilization. Ancient texts such as the Vedas, Puranas, and Samhitas mention the use of medicinal plants to treat various ailments, highlighting India's rich heritage in this field. The Traditional Knowledge Digital Library, under the Government of India, has documented around 8,000 medicinal plants. According to the World Health Organization (WHO), approximately 80 percent of the global population relies on herbal medicines for their primary health care needs. India boasts diverse indigenous medicinal systems, including Ayurveda, Unani, Siddha, and Folk (tribal) medicines. Recognizing the significance of these practices, a demonstrative unit focused on medicinal and aromatic plants has been established in the Horticulture farm of A.K.S. University. The primary goal is to foster awareness among students and farmers about the invaluable role of these plants in healthcare and traditional medicine.





### 8.2.8. Nakshtra Vatika of AKS University

In the Vedic religion, the concept of natal constellations plays a pivotal role. Each person is affiliated with specific zodiac symbols and is born under a particular constellation. This designated constellation is considered the individual's natal constellation, functioning as their guardian. These constellations are intricately linked to specific trees on Earth and are known as Nakshatra Vriksha.

Various Sanskrit treatises such as Narada Purana, Narada Samhita, and Raj Nighantu provide lists of 27 trees that are to be revered in accordance with one's natal constellation. The tree associated with a person's constellation is treated with the reverence reserved for a deity. It is expected that individuals born under a particular constellation not only plant and protect these trees wholeheartedly but also engage in their worship, recognizing the profound spiritual connection between themselves and their designated tree. These plants are Ashwini- Kuchla (*Strychnos nux-vomica* L.), Bharani-Aonla (*Phyllanthus emblica* L.), Kritika- Gular (*Ficus racemosa* L.), Rohini- Jamun (*Syzygium cumini* (L.) Skeels), Mrigshira- Khair (*Senegalia catechu* (L.f.) P.J.H. Hurter & Mabb.) , Ardra- Tendu (*Diospyros melanoxylon* Roxb.), Punarvasu- Bans (*Dendrocalamus strictus* Nees.), Pushya- Pipal (*Ficus religiosa* L.), Ashlesha- Nagkesar (*Mesua ferrea* L.), Magha-Bat (*Ficus benghalensis* L.), PurvaPhalguni- Palash (*Butea monosperma* (Lam.) Kuntze), UttaraPhalguni- Pakar (*Ficus virens* Aiton), Hasta-Reetha (*Sapindus mukorossi* Gaertn.), Chitra-Bel (*Aegle marmelos* (L.) Correa), Swati- Arjun (*Terminalia arjuna* (Roxb. ex DC.) Wight & Arn.), Vishakha- Kaitha (*Limonia acidissima* L.), Anuradha- Molshri (*Mimusops elengi* L.), Jyeshtha- Semal (*Bombax ceiba* L.), Mula- Sal (*Shorea robusta* C.F. Gaertn.), Purvashada- Bent Calamus rotung L.), Uttarashada- Kathal (*Artocarpus heterophyllus* Lam.), Shravan- Aak (*Calotropis procera* (Ait.) W.T. Aiton), Dhanishtha- Shami (*Prosopis cineraria* (L.) Druce), Shatvisha- Kadamb (*Neolamackia cadamba* (Roxb.) Bosser), PurvaBhadrapad-Aam (*Mangifera indica* L.), UttaraBhadrapad- Neem (*Azadirachta indica* A. Juss) and Rewati- Mahua (*Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr.).





AKS University has developed a Nakhetra Vatika in the University Herbal Garden

### 8.2.9. Navagraha Vatika

In the Herbal Garden of AKS University, a special area called the Navagraha Vatika has been established. The term "Navagraha Vatika" refers to a garden representing the forces of the nine planets through plants, trees, bushes, or grasses. Each plant associated with a specific planet is strategically planted in a particular direction to harness the beneficial energies of the nine celestial bodies, creating a harmonious Navagraha Vatika or Nine Planets Garden. The plants corresponding to the nine planets are as follows:

1. Surya (Sun): Aak (*Calotropis procera* (Aiton) W.T. Aiton)
2. Chandra (Moon): Palash (*Butea monosperma* (Lam.) Kuntze)
3. Mangal (Mars): Khair (*Senegalia catechu* (L. f.) P.J.H. Hurter & Mabb.)
4. Budh (Mercury): Apamarga (*Achyranthes aspera* L.)
5. Brihaspati (Jupiter): Pipal (*Ficus religiosa* L.)
6. Shukra (Venus): Gular (*Ficus racemosa* L.)
7. Shani (Saturn): Shami (*Prosopis cineraria* (L.) Druce)
8. Rahu: Dub (*Cynodon dactylon* (L.) Pers.)
9. Ketu: Kusha (*Desmostachya bipinnata* (L.) Stapf)

This carefully curated garden serves as a symbolic and spiritual representation of the cosmic influence of the planets, emphasizing the connection between nature and celestial forces.



Navagraha Vatika at AKS University







## 9. Conclusion

As reflect on the academic year 2021-22, it is evident that the journey has been one of resilience, adaptation, and growth in the wake of the unprecedented challenges posed by the COVID-19 pandemic. We have emerged from this global crisis with renewed vigour and a commitment to enhancing our educational practices while prioritizing the health and well-being of our students, faculty, and staff.

This year, we implemented innovative teaching methods and harnessed technology to ensure a seamless blend of in-person and virtual learning. Our faculty demonstrated remarkable dedication, adapting curricula and pedagogies to meet the needs of our students. The robust response to the pandemic has not only enriched the learning experience but also fostered a sense of community and connection that transcended physical limitations.

Infrastructure development has been a key focus, with the modernization of classrooms, laboratories, and digital resources, ensuring that students and faculty have access to state-of-the-art facilities. The university's efforts in community engagement and industry partnerships have strengthened its ties with local communities and industry stakeholders, providing students with valuable real-world experience and contributing to regional development. The university has made significant strides in research and development, focusing on issues relevant to our society and the ongoing recovery from the pandemic. Our students have actively engaged in various extracurricular initiatives, showcasing their talents and contributing positively to the community, embodying the spirit of resilience.

Looking forward, we remain committed to fostering an inclusive and innovative learning environment that prepares our students to face future challenges. The lessons learned during this period will inform our strategies as we continue to evolve, ensuring that AKS University stands at the forefront of higher education in our region.

Overall, the collective efforts of the dedicated faculty, staff, and students have propelled AKS University Satna towards its mission of academic excellence, innovation, and holistic development. As we look forward to the future, we remain committed to continuous improvement, ensuring that AKS University Satna continues to be a leading institution in education and research, making a positive impact on society and the world at large.



Established by MP Legislature Act no. 44 of 2011 and duly recognised by UGC under section 2 (f)

# **AKS University, Satna (M.P.)**

**THE UNIVERSITY WITH DEFFERENCE**

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