









# "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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B.P. SONI
Chancellor
AKS University
and Thinker & Initiator of
The World Government for World Peace

AKS University, Satna is an institution where innovation & skill converge with education, & every student embarks on a journey of self-discovery & growth. It is my honour to lead a community committed to fostering skills, knowledge & a fervour for excellence. At AKSU, we believe in the transformative power of education.

Our team is dedicated is to provide a dynamic learning environment, ensuring that students not only gain knowledge but also acquire the practical skills necessary for success in today's ever-evolving global landscape. Education, at its core, should not only impart theoretical knowledge but also equip individuals with the skills to apply that knowledge effectively. Skills that bridge the gap between learning & real-world application, & transforming information into tangible solutions. I extend an invitation to explore the myriad opportunities that AKS University offers & encourage you to join us in shaping a future where your skills become a catalyst for positive change.

Your journey towards excellence begins here.

B. P. SoniChancellorAKS University, Satna



Prof. P.K. Banik
Vice-Chancellor,
AKS University, Satna (MP) India



The commitment of AKS University, Satna to foster academic excellence and societal development is truly impressive. With its extensive range of initiatives, from advanced research facilities to comprehensive student support programs, the university plays a significant role in nation-building and educational reform.

AKS University's dedication to holistic education, integrating values and promoting diverse extra-curricular and co-curricular activities, aligns well with its mission to create socially aware and responsible citizens. The implementation of the Choice-Based Credit System (CBCS), international collaborations, and multitiered academic offerings have made the university a competitive institution globally.

The University's Placement Cell and National Service Scheme are additional assets, offering students both professional preparation and avenues for civic engagement. Moreover, its infrastructure, including the library's extensive resources and dedicated center for academic environment.

The university's achievements reflect its educational impact, ranking within the top institutions in India, especially in the Vindhya region. Overall, AKS University represents a cornerstone of higher education, driven by a commitment to academic and societal advancement, making it an inviting institution for students aiming to contribute meaningfully to society.

Warm regards,

Professor P. K. Banik Vice Chancellor AKS University



#### 1. ABOUT AKS UNIVERSITY

This Annual Report is prepared for revealing the overall journey of progress of AKS University, Satna during the academic session of 2020-21. This session was a transformative period for AKS University, as it navigated the unprecedented challenges posed by the COVID-19 pandemic. The university demonstrated resilience and adaptability by implementing innovative measures to ensure continuity in education, research, and student support while prioritizing the health and safety of its community.

Founded by visionary Shri B. P. Soni, AKS University's roots trace back to 1996, when he opened a computer college in Satna with a mission to make education accessible to all. Recognizing the growing demand for higher education in the region, the AKS Charitable Trust established AKS University in 2011 through the Government of Madhya Pradesh Act, Notification No. 44, issued on December 31, 2011. In 2014, the university received UGC recognition under Section 2(f) of the UGC Act, further solidifying its status as a distinguished higher education institution.

AKS University goes beyond merely preparing students for entrepreneurship & employment; it focuses on providing "education for life," equipping students with essential leadership and professional skills necessary to succeed in today's globalized economy. Located in Satna town along NH-75, the university is conveniently situated approximately 4 km from Satna Railway Station and 120 km from the UNESCO World Heritage site of Khajuraho, making it accessible to students across the region.

Currently, AKS University serves a diverse students of over 7600, offering a wide range of programs across 10 Faculties. Through a curriculum designed to address current technological advancements and socioeconomic needs, AKS University continues to foster an environment of learning, growth, and innovation.

#### 1.1 The key features of the University to make it par excellence are,

The key features that distinguish AKS University as an institution of excellence include:

- Industry-Relevant Curriculum: Programs are tailored to align with the latest technological developments and address current socioeconomic needs, ensuring students are well-prepared for modern industry demands.
- Scholarship Programs: Scholarships are available for meritorious students, supporting academic achievement and making quality education accessible to talented individuals.



- **Distinguished Faculty**: The university's teaching faculty comprises renowned academicians, scholars, and industry experts from prestigious institutions, bringing a wealth of knowledge and experience to the classroom.
- Advanced Teaching Methodologies: AKS University incorporates innovative, ICT-enabled teaching practices and the latest learning pedagogies, creating an interactive and modern educational experience.
- **State-of-the-Art Infrastructure**: The campus is equipped with modern labs, classrooms, and other facilities that provide hands-on training opportunities, enhancing students' practical skills.
- **Research Opportunities**: The university encourages research at all levels, with faculty and students participating in projects that offer real-world applications and industry collaboration.
- **Holistic Student Development**: In addition to academics, AKS University offers a range of sports, extracurricular activities, and moral education, promoting the all-round growth of students.

Through these features, AKS University is dedicated to fostering academic excellence and preparing students to meet the challenges of a dynamic global landscape.

AKS University is committed to fostering skill development among field and industrial workers through targeted training programs. The university's research initiatives focus on indigenous traditional knowledge, food processing technology, agricultural product development, and biotechnology. As part of its Rural Agriculture Work Experience Programme, AKS University has adopted 35 villages in the Satna district, providing farmers with modern farming techniques.

In addition to a strong academic environment, the university prioritizes moral development and offers a variety of extracurricular activities, including sports. Students actively participate in inter-university technical fests and youth festivals at prestigious institutions such as IIT-KGP, IIS Bangalore, and IIT(ISM) Dhanbad, often achieving commendable positions in these competitions.

# 1.2. Objective of the AKS University:

"To Provide World Class State-of-the Art Education in the country".



### 1.3. Vision of the AKS University:

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.

#### 1.4 Mission:

- To promote multidisciplinary sustainable research in all faculties of University, and enhance our position as one of the best research and teaching universities.
- To promote innovation at all level in all faculties of University and provide emphasis on IPR, patents, incubation centre/s and startups.
- Implement updated outcome based curricula (OBE), develop graduate attributes among all students and create student centric teaching and learning environment.
- To develop proper correlation between teaching and research employing new approaches and pedagogies.
- Develop collaborations with premier national and international institute, universities and industries.
- To promote abilities of lifelong learning and life skills among all students and to impart value based and culturally rich education.
- Emphasis on quality education and promote teaching and research on sustainable development goals (SDGs) and protection of our environment.
- To develop capabilities among students to think and work independently.
- To develop fusion between academic and industries in terms of research collaborations, entrepreneurship and internship.
- Ensuring good governance inculcating accountability among all stakeholders of University.
- To provide a platform for all students from various backgrounds including rural students to achieve academics excellence inculcate human values and create an inclusive culture of equality and to be responsible citizens at national as well as global level. To contribute to the development of holistic knowledge society.







UGC Expert Team inspected lab during visit of AKS University

UGC Expert Team with AKS University faculties

# 1.5 SWOC Analysis (Strength, Weakness, Opportunity and Challenges) of the AKS University:

At AKS University, we recognize that our most valuable assets are our faculty, laboratories, and library. To enhance the educational experience, we are committed to developing state-of-the-art laboratories that provide hands-on training for our students and foster research and development across various fields.

The university features a central library, complemented by departmental libraries for each faculty, as well as a book bank system to ensure that students have access to essential resources. We are also in the process of creating an AKS University Knowledge Bank and an e-library system.

Our faculty comprises alumni from prestigious institutions, including IITs, NITs, BIT, HBTI, ISM, Central and state Universities and others esteemed institutions of the country. Each department is led by experienced professors, many of whom have from renowned universities, research institutions and industries with both national and international acclaim.

The present Vice Chancellor **Professor-P K Banik**, participated in All India University Meeting, which was held in Bhopal. It was two days meeting, organized in Ravindra Nath Tagore University on 10<sup>th</sup> and 11<sup>th</sup> of January 2020, which witnessed the participation of almost all the Vice-Chancellors of the Universities, which come within the central zone of India. It was the first occasion when a private University was playing responsibility of organizing the meeting like this in which the intellectuals and



educationists from more than eighty Universities made their participation. Speaking on the occasion, Professor-Banik expressed his pertinent and logical views on the topics like Bench Marking, Higher Education Ranking, Rating, Research and Development.

The SWOC (Strengths, Weaknesses, Opportunities, and Challenges) analysis of AKS University, Satna, highlights the key internal and external factors impacting the institution's performance and growth.

#### 1.5.1 Strengths

- Qualified Faculty and Experienced Leadership: AKS University benefits from faculty with extensive academic and industry experience, many of whom are alumni of prestigious institutions.
- Comprehensive Curriculum and Innovative Teaching: The university's curriculum is aligned with industry needs and includes a choice-based credit system (CBCS) and outcome-based education (OBE), promoting flexibility and practical skills.
- Research and Development Focus: A strong emphasis on research across fields, such as biotechnology, agriculture, and environmental sciences, positions the university as a center for innovation.
- **Modern Infrastructure**: State-of-the-art laboratories, libraries, and other learning resources support hands-on training and practical exposure.
- **Community and Industry Engagement**: Initiatives like the Rural Agriculture Work Experience Programme and collaborations with industry ensure the university's active role in local development.

#### 1.5.2 Weaknesses

- Location in a Semi-Urban Area: The semi-urban setting makes it challenging to attract top-tier faculty and international students.
- Limited Government Research Funding: As a private university, AKS faces difficulties securing substantial government grants for research.
- Lack of On-Campus Housing: The limited availability of on-campus residential facilities restricts accommodation options for out-of-town students.
- **Minimal Alumni Funding**: The university currently receives limited financial support from alumni, which can restrict its growth in certain areas.



# 1.5.3 Opportunities

- Expanding Placement and Industry Connections: Strengthening industry collaborations and alumni networks can further improve placement opportunities for students.
- **Government Partnerships**: AKS University has opportunities to contribute to national initiatives like Startup India, Digital India, and Swachh Bharat.
- **Research Collaborations**: Increased partnerships with national and international universities and research institutions can expand the university's research capacity.
- Focus on Sustainable and Impactful Research: There is potential for impactful research targeting rural upliftment and societal improvement, including projects in agrivoltaics, biotechnology, and eco-friendly materials.

#### 1.5.4 Challenges

- Rapid Technological Changes: Keeping up with fast-evolving technologies and pedagogical practices requires constant adaptation and investment.
- Recruiting High-Quality Faculty: Attracting and retaining skilled faculty at the associate and professor levels is a challenge due to the location and limited funding options.
- **Student Awareness and Outreach**: Raising awareness about available programs, especially among prospective rural students, is crucial for attracting a larger and more diverse student body.
- **Meeting Global Standards**: Ensuring compliance with both national regulations and international benchmarks in education and research is essential to remain competitive on a global scale.

Through a clear understanding of these strengths, weaknesses, opportunities, and challenges, AKS University can strategically address areas for improvement and build on its core strengths to enhance its role as a leading educational institution.



#### 1.6. University Credential: -List of Awards

Over the past eight years, AKS University has achieved significant recognition. In 2015, it received the "Excellent Private University in the Rural Sector" award from the Ministry of HRD, Government of India. The following year, in 2014, it was honored as the "Excellent Private University in Madhya Pradesh" at the National MP Technical Excellence Education Summit by CMAI. In 2017, AKS University ranked 27<sup>th</sup> among private universities in the India Today survey. Most recently, it was recognized as the "Best Private University in the Rural Sector" by Shri Kamal Nath, the Hon'ble Chief Minister of Madhya Pradesh







Awards and Recognitions of AKS University

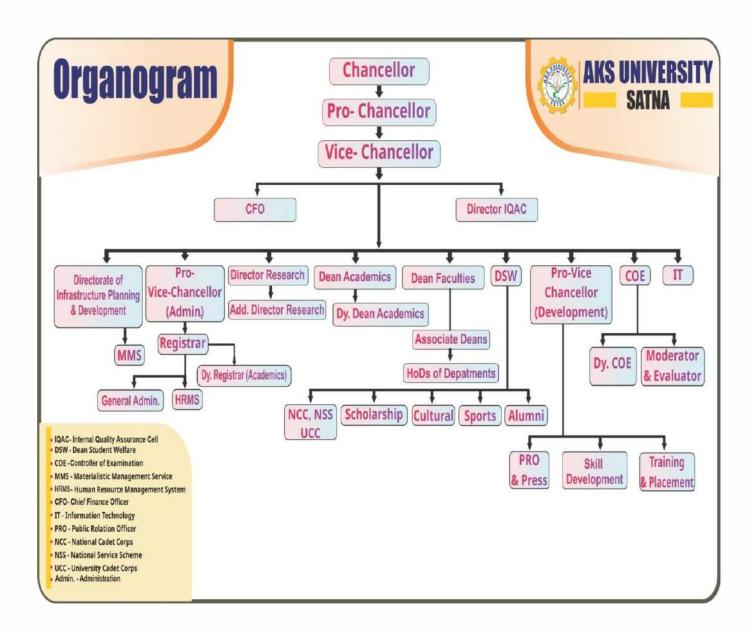
#### 1.7 Administrative Structure (Organogram):-

The administrative structure of AKS University, Satna, is designed to ensure efficient governance, support academic excellence, and foster a student-centered environment. At the top of the structure is the Board of Governors, which provides strategic direction and oversees the university's policies. The Vice-Chancellor, who serves as the chief executive officer, manages day-to-day operations, academic planning, and development efforts. Supporting the Vice-Chancellor are the Pro Vice-Chancellor, Registrar, Chief Finance & Account Officer and Deans of various faculties, each responsible for the academic leadership of their respective disciplines, including Agriculture, Engineering, Life Sciences, Management, and more.

Each faculty is further organized into departments led by department heads, who coordinate teaching, research, and departmental administration. Additionally, the Registrar oversees academic records, admissions, and regulatory compliance, ensuring smooth institutional functioning. The Controller of Examinations is responsible for all examination-related activities, maintaining assessment standards and academic integrity.

Various committees, such as the Academic Council and Research Council, support decision-making on curriculum development, research initiatives, and policy implementation. To address student needs, the university also has dedicated offices for Student Welfare, Placement, and Counselling. This robust administrative structure enables AKS University to maintain high standards of education and fulfill its mission effectively.







#### 2 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 - Faculty of Agriculture Science & Technology (FAST):

The Faculty of Agriculture Science and Technology at AKS University is one of the largest faculties, dedicated to integrating teaching, research, and extension programs. Its primary objectives include:

- Providing quality education in the field of agriculture.
- Advancing learning and conducting research in agricultural science and technology, particularly for rural and marginalized farmers.
- Engaging in activities that align with the educational, research, and extension needs of the faculty and the university as a whole.

The educational programs at the Faculty of Agriculture Science and Technology aim to transform rural unemployed youth into successful agricultural entrepreneurs and agri-business managers. The impact of agricultural education will be reflected in the emergence of new entrepreneurs, increased employment opportunities, higher earnings, and improved working conditions.

The faculty is enriched by a 60-acre agricultural farm adjacent to its building, featuring an automatic weather station, two polyhouses, four nethouses, two mother nurseries, and various experimental fields and laboratories that provide hands-on experience for students. The modern dairy houses over 100 cows of various breeds, including Gir, while the poultry unit features the rare Kadaknath variety, along with a fishery unit. Students gain exposure to diverse crops and innovative techniques in crop production. Additionally, the faculty practices organic farming, producing around 200 tons of vermicompost and Nadep compost annually for use on the university farm.

The Faculty of Agriculture Science and Technology is committed to having qualified and experienced faculty members who inspire students to embrace their roles as the world's agricultural providers.



The undergraduate and postgraduate programs offered under the Faculty of Agriculture Science and Technology at AKS University include:

UG Level Courses	B. Sc. (Hons ) Agriculture
(4 Year Degree Programme) B. Tech. (Agricultural	
	Engineering)
	B. Tech. (Food Technology)
PG Level Courses	M. Sc. Agriculture (Agronomy/
(2 Year Degree Programme)	Horticulture /Soil Science/ Plant
	Pathology)

#### 2.2- Faculty of Engineering & Technology:

The engineering programs at AKS University, Satna, offer a dynamic and inclusive curriculum designed to help students understand the global and social impacts of engineering solutions, as well as analyze contemporary engineering challenges. This approach allows students to cultivate essential skills for their future careers.

The Faculty of Engineering and Technology stands out as the leading engineering institution in the Vindhya region, providing opportunities for individuals with diverse abilities and educational backgrounds to thrive both intellectually and vocationally.

The programs begin with a solid foundation in engineering principles and professional practices, equipping graduates to pursue a wide range of responsible engineering roles. Students then have the opportunity to specialize in specific areas, preparing them to excel in their chosen fields.

The following programs are offered by the Faculty of Engineering & Technology:

UG Level Courses (4 Year Degree Programme)	B. Tech (Mechanical Engineering, Civil Engineering, Electrical Engineering, Computer Science & Engineering, Mining Engineering and Cement Technology)
PG Level Courses (2 Year Degree Programme)	M. Tech.



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.

#### 2.3 - Faculty of Life Science & Technology

The Faculty of Life Science & Technology aims to deliver high-quality education paired with extensive practical and research opportunities, cultivating skilled biotechnocrats and entrepreneurs who meet the evolving needs of both academia and industry in the fields of Microbiology and Biotechnology.

This faculty is strengthened by a dedicated team of faculty members and a diverse student body from across the country. With a solid foundation in Microbial Technology and Plant Biotechnology, our programs emphasize key areas such as Genetics, Molecular Biology, Industrial Microbiology, Immunology, Bioinformatics, and Biochemistry, among others.

Students receive comprehensive training in Microbiology, Biochemistry, Genetics, Developmental Biology, Genetic Engineering, Biochemical Engineering, and elements of Biophysics, Biostatistics, Environmental Biology, and Bioinformatics. Biotechnology is approached as an interdisciplinary field, integrating Life Sciences, Chemical Engineering, and Bioprocesses. Our curriculum prepares students for industrial processes, focusing on byproduct evolution and the design and optimization of process equipment for effective production.

The Faculty of Life Science & Technology offers a two-year Master of Science (M.Sc.) in Biotechnology, a three-year Bachelor of Science (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 PhD program in Biotechnology.

#### 2.4 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 as the Rajiv Gandhi Institute of Pharmacy in 2006, the



college was affiliated with Rajiv Gandhi Technological University in Bhopal and became a constituent unit of AKS University in 2012. It is recognized by the Pharmacy Council of India (PCI), New Delhi.

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

#### 2.5 Faculty of Computer Application & Information Technology

Faculty of Computer Applications and Information Technology at AKS University, Satna, is dedicated to equipping students with the vision, creativity, and innovation needed to thrive in the corporate world. Our highly qualified and experienced faculty play a pivotal role in this mission.

We aim to provide a cutting-edge curriculum that combines theory, practical experience, projects, and seminars. Our primary goals are to enhance problem-solving abilities, foster innovative thinking, develop analytical skills, promote teamwork, and improve communication skills. We also emphasize readiness for emerging technologies, including artificial intelligence, IoT, machine learning, cloud computing, and network security.

Our department features well-equipped labs with the latest software and our own Management Information System, supported by a team of highly competent faculty members.

### 2.6 Faculty of Basic Sciences

The Faculty of Basic Sciences at AKS University, Satna, is dedicated to promoting collaborative, interdisciplinary research in Physics, Chemistry, and Mathematics, addressing the future needs of society. Basic science and research are essential for cultivating a new generation of thinkers and leaders in Science and Technology. In India, the significance of basic science has been amplified through various government initiatives, such as KVPY and NTSE, as well as the establishment of esteemed



institutions like IISER, NPL, ISRO, TIFR, and the development of Solar and Nuclear Power Plants.

What sets our program apart is its interdisciplinary focus, incorporating a strong engineering perspective and providing exposure to various fields within the Basic Sciences. The Faculty currently offers Bachelor's, Master's, and Ph.D. programs across Physics, Chemistry, and Mathematics.

#### 2.7. Faculty of Commerce & Financial Studies

The Faculty of Commerce and Financial Studies at AKS University is celebrated for its outstanding teaching and vibrant curriculum. Our academic programs are of the highest caliber, reflecting our belief in the transformative power of ideas. Our diverse faculty and student body, representing a range of social backgrounds, collaborate to maintain our department's esteemed reputation for excellence in education, particularly in the economic, institutional, and organizational dimensions of commerce.

We are committed to creating an environment that promotes quality education in Commerce, Entrepreneurship, and Research. Our innovative approaches and dedication to academic excellence establish us as a leading institution focused on holistic development, aiming to uplift lives and society. We emphasize the cultivation of social, moral, ethical, and intellectual skills in our students, empowering them to become nation builders and sources of inspiration.

UG Level Courses (3 and 4 Year Degree Programme)	Bachelor of Commerce (Hons.)
	Bachelor of Commerce
PG Level Courses	M.com
(2 Year Degree Programme)	



### 2.8 Faculty of Management Studies

At AKS University Faculty of Management Studies, we are dedicated to delivering top-tier management education. Our emphasis on research, innovation, high-quality publications, and corporate consultancy has established us as a leader in the field.

**Programs Designed for Your Success:** Our diverse offerings, including BBA (H), MBA, and Ph.D. programs, equip students with the essential skills and knowledge for thriving careers in the corporate sector. Whether you're embarking on your educational journey or seeking to elevate your career, our programs provide an ideal foundation for personal and professional growth.

**Proven Track Record:** With a longstanding reputation for educational excellence and a strong placement record, AKS University Faculty of Management Studies is the preferred choice for aspiring professionals. Join our network of successful alumni who have excelled in top companies across various industries.

Tailored Programs for Every Aspiration: We offer a variety of programs to suit different interests and career objectives, giving you the flexibility to choose the path that aligns with your goals. Whether you wish to specialize in a specific area or explore the broader aspects of management, our programs lay the groundwork for your success.

- BBA (Bachelor of Business Administration) with two specializations
- MBA (Master of Business Administration) with five specializations
- Ph.D. (Research Programs)

### 2.9 Faculty of Social Sciences & Humanities

Social work is an interdisciplinary field that examines the lives and experiences of socially vulnerable individuals. A key focus is understanding the origins and effects of social problems at micro, meso, and macro levels. The field is particularly relevant for analyzing various interventions aimed at preventing or addressing these issues. It also encompasses research on how social work is organized and practiced.

At the Faculty of Social Sciences & Humanities, we take pride in our studentcentered approach, which provides the flexibility and support for students to tailor their



educational experiences. This can involve combining programs and certificates across different areas, pursuing double majors, or engaging in unique interdisciplinary opportunities such as Work and Employment, Indigenous Studies, and Race & Ethnicity.

As part of the AKSU community, students not only receive a high-quality education but also gain valuable experiences outside the classroom. We emphasize the development of essential life and employment skills, including research and leadership competencies, enabling students to tackle significant societal challenges. We offer a range of undergraduate and postgraduate research opportunities, both locally and internationally, along with peer mentorship training and support. Faculty of Social Sciences & Humanities also offers courses of Masters Degree in Yoga

2 Yrs	B.A.
2 Yrs	M.A. Yoga
1 Yrs	PG. diploma of yoga
3 Yrs (Minimum)	Ph.D

#### 2.10 Faculty of Education

The Faculty of Education at AKS University was established in 2012 and is recognized by the National Council for Teacher Education (NCTE). This co-educational institution offers a two-year B.Ed. program designed to cultivate professional values and enhance the learning skills of future educators through the development of the 4Cs: Curiosity, Creativity, Competence, and Compassion.

Our Faculty of Education is dedicated to fostering quality and excellence in training value-oriented teachers for society, equipping them with knowledge in emerging educational fields to thrive in a technology-driven world.



# 3. Curriculum Design and Teaching Learning

#### 3.1 Curriculum Components

The curriculum, a multifaceted framework, acts as a roadmap for the teaching and learning experiences students engage with in an academic program. Curriculum design is a crucial component of any nation's educational system, encompassing objectives, learning outcomes, course content, instructional methods, and assessment strategies. With the rapid evolution of technology and the emergence of new fields, it is essential that curricula remain dynamic, undergoing regular reviews and updates.

At AKS University (AKSU), our mission is to nurture the next generation of leaders by equipping students with the resources they need to explore a diverse range of academic and recreational interests. We emphasize the development of 21st-century skills—such as teamwork, problem-solving, research, time management, information synthesis, and proficiency with advanced technological tools—empowering students to take ownership of their learning while benefiting from the guidance of experienced faculty.

AKSU's educational approach prioritizes exploration, creativity, learning, and critical thinking. We are committed to delivering education grounded in systematic pedagogical principles, transforming these into practical learning experiences that prepare students for career paths aligned with their passions and expertise.

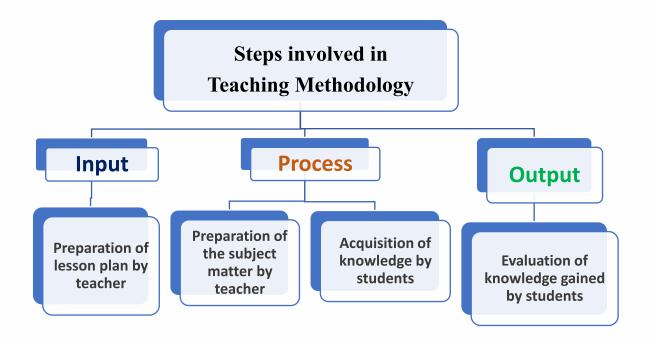
Our Project-Based Learning (PBL) methodology integrates real-world contexts and technology into the curriculum, fostering independent work, critical thinking, and lifelong learning. Our carefully crafted modules aim to produce employable graduates ready to excel as specialists across various industries, businesses, and public service sectors. We achieve this by enhancing their ability to integrate and apply technical concepts, promoting interactive development, and encouraging creative problem-solving. The module also focuses on the personality development of students living and believing in sustainable environment with Human Values, Yoga and Meditation to enhance their employability and build confidence, innovative skills, and imagination.



#### 3.2 Teaching-Learning & Evaluation System

The University employs a system of multiple and continuous activity evaluation, which is communicated through various channels, including the college calendar. Each student and faculty member receives a copy of the calendar at the start of the academic session. The Controller of Examinations (CoE) oversees all internal assessments and manages the logistics for university-wide examinations.

To support its students, AKSU has developed innovative Teaching-Learning and Evaluation processes that effectively assess the knowledge and skills acquired throughout the programs. This approach is founded on the belief that evaluation is integral to examination and that examination is essential for assessment. Consequently, the University has established a diverse array of evaluation methods that operate alongside curriculum delivery.



#### 3.3 Our Strategies of AKSU

AKSU is dedicated to providing quality higher education for undergraduate and postgraduate students through a comprehensive education service model. Key components include:



- Team-Centric Learning and Key Point Pedagogy: Designed to support slow learners, this model enhances understanding through collaborative exercises.
- Project-Based Learning: This approach cultivates critical thinking, communication, and cooperation, emphasizing innovative experimental learning through practical applications.
- Blended and Multidisciplinary Learning: AKSU leverages the transformative potential of integrated learning approaches.
- Industry-Academia Collaboration: Partnerships with organizations such as Synergy University, MUSE Mantra, and IBM facilitate experiential learning through educational tours and industry exposure.
- **SWOT Analysis**: We apply SWOT analysis to evaluate educational aspects, ensuring accountability to societal expectations.
- **Employability Skills Development**: Our programs focus on internships and placements, preparing students for responsible roles and practical experiences.
- **Library Best Practices**: Continuous quality enhancement in library services supports academic success.
- Core Values and Vision Alignment: We adhere to the university's mission and values, emphasizing personality development and communication skills training.
- **Technical Competency Mapping**: Students are trained to leverage interpersonal skills to meet organizational goals.
- Social Responsibility: Through NSS, NCC, and UCC, students are encouraged to engage in global research initiatives.
- State-of-the-Art Facilities: Our advanced infrastructure and laboratories provide students with hands-on experience using the latest technologies.

#### 3.4 Mentorship Model

AKSU believes that mentoring is an incredibly valuable experience essential for growth and development for all concerned. Setting up the right mentor mentee relationship involves creating a safe and supportive environment where both mentor and mentee can engage in building trust, setting goals and achieving them through creative problem solving and reaching a solution. For the benefit of our students a faculty mentor



is assigned to every student. Each Faculty Mentor has 30 students assigned to him for their entire scholastic duration at AKSU.



Students and their mentors share responsibility for ensuring productive and rewarding mentoring relationships. Both parties have a role to play in the success of mentoring. For the students, a mentor is someone who serves as a guide throughout their institutional training. They provide both professional and personal advice to the students. They further give constructive feedback on writing, teaching and other elements of career design. They can serve to help students balance professional goals with their personal lives or give emotional encouragement during challenging times.



# 4. Research Development and Innovations

The academic session of 2019-20 marked a period of substantial progress for AKS University, Satna, in the areas of research, development, and innovation. With a strong focus on fostering knowledge creation, technology development, and practical applications, the university pursued a range of initiatives across disciplines, including biotechnology, agricultural sciences, environmental studies, engineering, and information technology. These efforts not only contributed to academic advancements but also addressed regional and societal needs. Below is an in-depth overview of the research development and innovation activities at AKS University during this period.

#### 4. 1. Research Centers and Areas of Focus

AKS University invested in developing dedicated researches that fostered interdisciplinary studies and facilitated impactful research. These researches were aligned with the university's priority areas, such as:

- **Biotechnology and Life Sciences**: Focused on microbial technology, plant biotechnology, and environmental biotechnology, these centers conducted research on genetic engineering, biochemistry, and industrial microbiology.
- Agricultural Sciences and Technology: With a strong emphasis on improving agricultural productivity, the university's research in this field included soil science, plant pathology, and horticulture. Projects under these areas were geared toward optimizing crop yield and developing sustainable farming practices.
- Environmental Science and Sustainability: AKS University's environmental research addressed pressing issues such as waste management, water purification, and sustainable resource management. Projects were tailored to address the environmental challenges faced by the local community and beyond.
- Engineering and Technology: Research in this faculty encompassed civil, electrical, and computer engineering, with projects focusing on the integration of new technologies like IoT, renewable energy systems, and materials engineering.



### 4.2. Interdisciplinary Research and Collaboration

To drive innovation, the university encouraged interdisciplinary research, combining knowledge from multiple fields to address complex challenges. Collaboration between faculties of agriculture, engineering, and environmental science led to projects on bioengineering and sustainable development. These collaborations were not only internal but also extended to partnerships with other universities and research institutions, as well as industry players, ensuring the practical relevance and applicability of research outcomes.

### 4.3 MOU with AKS University

For the continual improvement, the university has signed MOU with various Indian and Overseas Institution for Training, Joint R&D and Exchange Programme. MOUs listed as under:

# Number of functional MoUs /linkage with institutions/ industries in India and abroad for internship.

Name of the organization with whom MOU/ Collaboration being signed	Purpose of MOU/ Collaboration	List the actual activities under each MOU
IP Intellect Services (IPIS)	Intellect Property Rights related Activities such as Patent, trademark, copyright, design registration	110 candidates selected for the 6 months training and internship
Mprex Healthcare Pvt Ltd	Internship in CRO	52 students internship and hands on training
Merck High End Skill Development Centre	Hand on training of students	virtual training of the selected candidates
IP Intellect Services (IPIS)	Intellectual Property Rights activities, including patents, trademarks, copyrights, and design registration.	15 candidates selected for the 3 months training and internship
Mprex Healthcare Pvt Ltd	Internship in CRO	64 student internship and hands on training



Grinson Phytoherb Pvt Limited	Student Internship and training related to food and nutraceutical products	62 student internship and hands on training for 3 months
Molechem Lifesciences Pvt Ltd	Internship in Pharmaceutical marketing company	60 student internship and hands on training
Invitox R and D Institute	Preclinical laboratory work and the offering of student internships	45 student internship and hands on training
Aster Analytical Research Institute	Work related to analytical instruments and the provision of student internships are key components in fostering hands-on experience and skill development for students.	58 student internship and hands on training for 3 months
IIT Delhi - Virtual Lab	Virtual Lab for Engineering Students of Many subject	FDP Student Lab Work in each semester

## 4.4. Funding and Support for Research Projects

Recognizing the need for financial support in fostering impactful research, AKS University allocated internal funds to research projects that addressed key academic and societal issues. For instance:

- Internally Funded Research Projects: In 2020-21, the university funded more than 200 projects across disciplines, supporting faculty and student researchers in conducting studies with real-world applications. These projects enabled scholars to explore innovative ideas, such as sustainable practices and eco-friendly materials.
- Industry Partnerships and Grants: AKS University successfully established partnerships with industries and government bodies, enabling access to external research grants. Industry collaboration allowed researchers to work on projects with immediate industrial applications, further strengthening the university's research ecosystem.



#### 4.4.1 Internal Research Project

AKS University Satna in 2020-21 actively promoted research and innovation. Faculty members secured both internal and external funding for various research projects, covering diverse disciplines like engineering, sciences, management, and humanities. These projects aimed to address contemporary challenges and contribute to the advancement of knowledge. The university's emphasis on research not only enhanced academic excellence but also fostered a culture of innovation among students and faculty. To achieve this university make arrangements as internal funding as well as faculty members of the university also effort for funding results there are more than 110 research projects have been sanctioned in this year 2020-21.

Name of of the PI/ Co-PI	Title of the research project, endowments, Research Chairs	Year of award or sanction
Dr Aslam Sayeed	Analysis of the Real Estate Market Trends	2020
Sandhya Pandey	Antimicrobial Studies on Different Varieties of Neem	2020
Arpit Srivastava	Computational analysis of Monkeypox Viral genomes for investigation of various drug like compounds	2020
Dr. Shikha Tripathi	Conducting Action Research Projects	2020
Vipul Sharma	Consumer Protection Laws and Their Effectiveness	2020
Dr.C.P. Singh	Design and construction of a Chaotic Pendulum System to Analyze Nonlinear Dynamics	2020
Dr.Saket Kumar	Design and Development of a Lab Kit for Microcontroller-Based Projects	2020
Er. Devendra Pandey	Development and Quality evaluation of biscuit fortified with barley	2020
Dr. Abhishek Singh	Effect of different level of organic nitrogen on yield and uptake of nutrient in pea. (Pisum sativum L.)	2020



ect of INM on yield and uptake of nutrients inseed. (Linum usitatissimum L.)  ect of inorganic and organic sources of sphatic fertilizers on uptake of nutrients in .(Pisum sativum L.)  ect of inorganic and organic sources of sphatic fertilizers on uptake of nutrients in .(Pisum sativum L.) in Rewa region  ect of integrated nutrient management on	2020
esphatic fertilizers on uptake of nutrients in .(Pisum sativum L.)  ect of inorganic and organic sources of esphatic fertilizers on uptake of nutrients in .(Pisum sativum L.) in Rewa region	
ect of inorganic and organic sources of sphatic fertilizers on uptake of nutrients in .(Pisum sativum L.) in Rewa region	2020
ect of inorganic and organic sources of sphatic fertilizers on uptake of nutrients in .(Pisum sativum L.) in Rewa region	2020
sphatic fertilizers on uptake of nutrients in .(Pisum sativum L.) in Rewa region	2020
.(Pisum sativum L.) in Rewa region	
ect of integrated nutrient management on	
E	2020
d and N,P,K and Zn uptake in pea (Pisum	
vum L.)	
ect of integrated nutrient management on	2020
d and nutrients uptake of Chickpea (Cicer	
etinum L.)	
ect of phosphorus levels on yield and	2020
rients uptake in barley (Hordeum vulgare	
ect of potassic fertilizer on yield and uptake	2020
orimary nutrients in wheat (Triticum	
tivum L.)	
ect of suphur levels on yield, oil content and	2020
tatissimum L. )	
ctrical Conductivity Analysis Of (PVA:	2020
4Cl) based Gel Polymer Electrolyte for	
ctrochemical Device Application	
ctrical Conductivity Analysis Of (PMMA:	2020
ctrochemical Device Application	
ancial Inclusion and Its Importance in	2020
veloping Economies	
ancial Management in Non-Profit	2020
ganizations	
netic Diversity Analysis of Pleurotus florida	2020
h special refernce to Satna District	
	ect of integrated nutrient management on Id and nutrients uptake of Chickpea (Cicer etinum L.)  ect of phosphorus levels on yield and rients uptake in barley (Hordeum vulgare et of potassic fertilizer on yield and uptake orimary nutrients in wheat (Triticum tivum L.)  ect of suphur levels on yield, oil content and ake of nutrients in linseed. (Linum tatissimum L.)  ectrical Conductivity Analysis Of (PVA: IACI) based Gel Polymer Electrolyte for ctrochemical Device Application  ectrical Conductivity Analysis Of (PMMA: IASCN) based Gel Polymer Electrolyte for ctrochemical Device Application  ancial Inclusion and Its Importance in veloping Economies  ancial Management in Non-Profit ganizations  metic Diversity Analysis of Pleurotus florida h special refernce to Satna District



Radha Singh	Impact of GST on Small and Medium Enterprises	2020
Dr Abhishek Singh	Study on effect of integrated nutrient management on growth, and yield of Cauliflower (Brassica oleracea var. botrytis L) Snow Ball-16	2020
Dr B V Singh	Study on the effect of organic Manures, Biofertilizer and enhancers on growth and productivity of Carrot (Daucus carota L.)	2020
Dr Abhishek Singh	Effect of different level of nitrogen and vermicompost on growth and yield of spinach (Spinacea oleracea L.) cv All Green	2020
Dr Abhishek Singh	Impact of integrated nutrient management on growth yield and shelf life of tomato (solanum lycoparsicum L.) cv. Pusa Ruby	2020
Dr. B.V. Singh	Effect of organic manuares and inorganic fertilizers on growth yield quality and economics of broccoli. (Brassica oleracea var. italica)	2020
Dr. B.V. Singh	Effects of different types of organic fertilizers on growth performance and yield attributes of radish (Raphanus Sativuas L.) cv. Mino Early Long	2020
Dr Abhishek Singh	Effect of NPK and different level of micro nutrients on growth herbage yield and leaf quality of red Amaranths (Amaranths cruentus) cv. Lal saag	2020
Mr Subhash Singh	Influence of different levels of farm yard manure on yield and nutrients uptake of Mustard (Brassica juncea L.)	2020
Mr. Ashutosh Gupta	Influence of integrated nutrient management in yield and nutrient uptake of paddy crop	2020
Mr. Ashutosh Gupta	Influence of integrated nutrient management in yield and nutrient uptake of wheat crop. (Triticum aestivum L.)	2020



Mr Atul Kumar Singh	Influence of integrated nutrient management on yield and nutrient uptake of mustard. (Brassica juncea L.)	2020
Mr. Ashutosh Gupta	Influence of integrated nutrient management on yield attributes and uuptake of nutrients in Barley (Hordeum vulgare L.)	2020
Dr. Shikha Tripathi	Integrating Social-Emotional Learning (SEL) into the Curriculum	2020
Dr Kausik Mukherjee	Inventory Management Optimization in Retail	2020
Mr Atul Kumar Singh	Nutrient uptake studies in relation to use of phosphatic fertilizer in pea (Pisum sativum L.)	2020
Dr. Kamlesh Choure	Evaluation of antimicrobial profile of Curcuma amada	2020
Dr. Deepak Mishra	Physicochemical profiling and antimicrobial analysis of Curcuma casia	2020
Dr Riddhi Bakshi	Marketing Management Strategies for Startups	2020
Dr. Deepak Mishra	Nutritional Analysis and Chemoprofiling of Pleurotus florida	2020
Ravi Pandey	Beniuficiation of low garde limestone for cement manufacture	2020
Ravi Pandey	Manufcature of transparent concrete	2020
Ms Suman Patel	Assessmnet of Air quality status of area adjoining M/s Satna Cement	2020
Shankar Bera	develop a Sustainable Urban Agriculture: IoT and Machine Learning Pilot Project - 2	2020
Dr. Shubhra Shaw	Election pridiction system by using machine learning	2020
Pragya Shrivasatva	Strengthening Cyber Defense by using Crypto system	2020
Ms. Alka Singh	Design an enhanced Digital Security Solutions	2020
Ms. Jyoti Tiwari	Pioneering VR and AR Technologies	2020



Dr.Akhilesh A Waoo	Designing and Establishing a Surveillance System for AKS University	2020
Dr.Akhilesh A Waoo	Designing An Enhanced Network Security System	2020
Mr.Lokendra Gaur	Develop a security using Cryptography and Compression in Serial Communication	2020
Mr.Vinay Dwivedi	Designing Facial Emotion Detection and Recognition	2020
Prof G K Pradhan	Case Studies and Best Practices in mining	2020
Er V S Ram	Rescue and Emergency Respons in underground mines	2020
Dr Sandeep Prasad	Automation and Robotics systems in opencast mine	2020
Er P C Tiwari	Advanced Extraction Techniques in coal mining	2020
Dr B K Mishra	Health and Environmental Impact due to mining activities	2020
Dr B K Mishra	Geotechnical survey importance in mining	2020
Er V S Ram	Energy Efficiency and Resource Management in unerground coal mining	2020
Dr Sandeep Prasad	Data Analytics and Digitalization in mining	2020
Er V S Ram	Ventilation and Climate Control analysis of undergound coal mine	2020
Prof. S Dasgupta	Sustainable Practices and Regulatory Compliance as per DGMS	2020
Dr. C. P. Singh	Development Of Multiferroic Nanomaterials (BiBaFeO3) For Device Applications	2020
Lovely. Singh	Synthesis And Characterization Of SiO2 Nanoparticle Using Sol-Gel Technique For Semiconductor Device Application	2020
Dr Ashwini A. Waoo	Physiochemical and Biological Profiling of Tamas River	2020



Dr. C. P. Singh	Synthesis and Characterization Of Zns Nano Particle Using Various Capping Agents	2020
Bhupen Singh	Hydro Bilogical study of Bansagar Dam Deolon , Dist Shadol	2020
Dr Mahendra Tiwari	Study the Impact of diforestation on soil degardation of Parsmania Forest Dist Satna	2020
Richha Triaphi	Retrofit of Foundation of an Existing Structure	2020
Garima Pandey	Development of Water Quality Index	2020
Mr. Rajbeer Singh Gaur	Nonlinear dyamic analysis of irregual star shape RCC multistory building sujected to different sesmisc intensity	2020
Dr. Bineeta Singh	Study on direct and indirect effect for quantitative and quality trails in mustard (brassica juncea l.)	2020
Mr. Ayodhya Prasad Pandey	Study on genetic variability & path coefficient analysis in wheat (triticum aestivum l.)	2020
Er Vijay Singh	Development Uses of bio diesel Agriculture machine	2020
Dr Salini Chaturvedi	Effects of oil yield and physiochemical properties of soybean oil extracted by mechanical expression and solvent extraction	2020
Mrs. Priya Dwivedi	Physiochemical and Biological Profiling of Ken River	2020
Dr. Ashwini A. Waoo	Development of Treatment strategies for Waste Water Treatment by using Moringa Oliofera	2020
Mr. K.P Tiwari	Smart Manufacturing System using AI	2020
Mr. Ram Narayan Shukla	Design and Analysis of a Solar-Powered Water Pump	2020
Dr.Madhu Gupta	A survey: PCOs Health awareness among women	2020
Dr.C.P. Singh	Illuminating the Cosmos: Exploring Spacecraft Electronics, Solar Activity, and Their Effects on Satellite Systems	2020
		•



Dr.C.P. Singh	Signal Processing Simplified: Developing a Lab Kit for DSP Applications and Experimentation	2020
Dr.O.P.Tripathi	FPGA-Based Digital Signal Processing System for Audio and Video Applications	2020
Dr.R.S.Mishra	Organizing Simulated Classroom Scenarios	2020
Dr. Bhagwan Deen	Creating a Self-Assessment and Goal-Setting Framework	2020
Dr.Sanand Kumar	Developing Strategies for Effective Parent- Teacher Communication	2020
Dr.Kalpana Mishra	Organizing Collaborative Lesson Planning Workshops	2020
Mr. Amir Haseeb Siddiqi	Implementing a Classroom Technology Integration Project	2020
Ku. Purnima Singh	Facilitating Peer Review and Evaluation Sessions	2020
Smt. Seema Dwivedi	Developing a Conflict Resolution and Mediation Training Program	2020
Dr. R.S.Mishra	Organizing Extracurricular Activity Planning Workshops	2020
Dr. Bhagwan Deen	Creating a Classroom Assessment and Feedback Toolkit	2020
Dr. Sanand Kumar	"Mastering Classroom Dynamics: A Comprehensive Classroom Management Toolkit	2020
Dr. Shikha Tripathi	Peer Review for Professional Growth: Enhancing Teaching Skills through Observations	2020
Dr. Kalpana Mishra	Reflective Practice: Building a Teaching Journal for Continuous Improvement	2020
Mr. Amir Haseeb Siddiqi	Microteaching Mastery: Enhancing Instructional Techniques through Simulated Lessons	2020



Neeta Singh	Tech-Savvy Educators: Integrating Digital Tools into Teaching	2020
Ku. Purnima Singh	Culturally Responsive Teaching: Creating Inclusive Learning Environments	2020
Smt. Seema Dwivedi	Mentorship Matters: Pairing B.Ed. Students with Experienced Educators	2020
Dr. Usha Dwivedi	Political Factors Influencing Foreign Direct Investment	2020
Reni Nigam	Antimicrobial Analysis of Genus Ocimum of Satna District	2020
Sandhya Pandey	Photochemical Profiling of Different Parts of Neem	2020
Lovely Mahawar	Study on Genetic Disorders and their Impact on tribal Communities of Sidhi District	2020
Sadhya Pandey	Genetic Diversity Assessment of Genus Ocimum of satna District	2020
Kiran Chabbriya	Quality Management Systems in Healthcare	2020
Dr. D.P Chaturvedi	Response of integrated nutrient management on yield and uptake of nutrients in chickpea. (Cicer arietinum L.)	2020
Dr. Neeraj Verma	Studies on impact of boron on nutrient uptake and oil content in mustard (Brassica juncea L.)	2020
Mr. Santosh Shrivastava	Studies on potassium application in relation to yield and uptake of nutrients (N,P,and Zn) in chick pea (Cicer arietinum L.)	2020
Mr Atul Kumar Singh	Studies on sulphur application on yield and nutrient uptake in mustard. (Brassica juncea L.)	2020
Mr Subhash Singh	Studies on the effect of integrated nutrient management on yield and nutrient uptake in barley. ( Hordeum vulgare L.)	2020
Mr. Subhash Singh	Studies on uptake of nutrients by plant through application of nitrogenous fertilizers in pea .(Pisum sativum L.)	2020



Mr Subhash Singh	Studies on uptake of nutrients by plant through application of NPK fertilizers in pea .(Pisum sativum L.)	2020
Mr Subhash Singh	Studies on uptake of nutrients by through Application on nitrogenous fertilizers in mustard crop. (Brassica juncea L.)	2020
Mr Subhash Singh	Studies on uptake of nutrients by through Application on phosphorus fertilizers in mustard crop. (Brassica juncea L.)	2020
Dr. Sandhya Tiwari	Study of Physiochemical and biological Profile of Fresh water with special reference to Nagod	2020
Dr Sailendra Yadav	Synthesis and characteristic of coumarin based heterocyclics corrosion inhabitants for mild steel in organic acid	2020
Rajeev Bairagi	The Economics of Electoral Systems and Voting Behaviour	2020

### 4.4.2 Seed Money

S. No	Name of the faculty	Received of Seed Money for the Project
1	Dr Kamlesh Choure	Novel nano bioformulation of PGPR for improving the productivity of legume crop
2	Dr Ashwini A. Waoo	Metagenomic analysis of heavy metal contaminated soil and novel formulation of novel inoculants for its rehabilitation
3	Arpit Srivastava	Molecular dynamic study of some herbal compounds for anti covid activity
4	Dr. Virendra Tiwari	Wireless Sensor Network (WSN)-based Internet of Things (IoT) system to safeguard home appliances.
5	Dr Pankaj Kumar	Dairy poential and importance of A2 milk of Gir and Sahiwal cows
6	Dr Niha Gautam	Dairy processing and infrastructure strengthening for sustainable milk production



7	Dr Pankaj Kumar	A study on scaling up productivity of Gir and Sahiwal cows
8	Mr. Rajbeer Singh Gaur	Foundation and certified seed production in mustard and its conservation
9	Mr. Amit Singh Tiwari	Integrated farming system Technology for recycling of by product and increasing productivity of crops
10	Dr.Balaji vikram (PI)	High and ultra high Density planting of Different promising cultivars of Mango under vindhya region of satna M.P.
11	Dr Sailendra Yadav	Development of Cost Effective Fire Resistant Wall Paint
12	Dr C P Singh	Development of MWCNT Doped nano composite gel polymer electrolyte for electrochemical device application
13	Dr.Surya Prakash Gupta	Synthesis and antidepressant activity of some N-substituted-2-phenyl indole derivatives
14	Dr.Gopal Garg	HPTLC fingerprint profile and pharmacognostic study of bilva fruit pulpa (aegle marmelos (linn.) Corr
15	Mr.Prabhakar Tiwari	In Vitro and In Vivo Comparison of Curcumin-Encapsulated Chitosan-Coated Poly(lactic-co-glycolic acid) Nanoparticles and Curcumin/Hydroxypropyl-β-Cyclodextrin Inclusion Complexes Administered Intranasally as Therapeutic Strategies for cancer treatment.
16	Mr. Achyut Pandey	A novel approach towards the design of self- clocked d flip-flop using 90 mm CMOS process
17	Er. Vikash Singh	Development and quality evaluation of Soymilk



#### 4.5. Significant Research Projects and Outcomes

During the 2019-20 academic session, numerous projects were undertaken by faculty and students, producing valuable outcomes. A few notable research initiatives include:

- Agricultural Research Projects: Projects in the agricultural sciences addressed critical issues such as abiotic stress tolerance in crops, soil health improvement, and water conservation methods. Research into renewable energy, a technology that combines agriculture and solar power, showcased innovative ways to maximize land use for both food and energy production.
- **Biotechnology Advancements**: Research in biotechnology focused on food safety, bioprocess technology, and medical biotechnology. One of the prominent projects involved developing nano-based solutions for water purification, providing affordable, eco-friendly solutions to improve water quality.
- Renewable Energy Research: In the engineering faculty, researchers focused on renewable energy sources, particularly solar and bioenergy. These projects aimed to reduce dependency on non-renewable resources and to support sustainable energy solutions for rural communities.
- Computer Science and Information Technology: focused on significant research projects in artificial intelligence, machine learning, IoT, and cybersecurity. Outcomes included the development of predictive models, smart automation solutions, and enhanced data encryption techniques, contributing to advancements in digital transformation and fostering collaborations with industry for practical applications.

#### 4.6 Publications and Research Output

 Faculty and students at AKS University were active in publishing their findings in reputed national and international journals. Research output included articles, book chapters, and conference proceedings across fields such as biotechnology, engineering, and environmental science. These publications not only increased the university's visibility in the academic world but also contributed valuable insights to their respective fields.



#### 4.6.1 Patents awarded in the year 2020-21

Name of the Faculty/student author of the patent	Patent Number	Date of Award	Patenet Awarding Agency
Dr. Akhilesh A. Waoo	202121010361	April, 30 <sup>th</sup> 2021	Indian Patent Office

### 4.6.2 Research Papers

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

Title of paper	Name of the author/s	Name of journal	ISSN number
Evaluation of solar PV panel performance under humid atmosphere	Sandeep Prasad	Materials Today: Proceedings	2214-7853
Ion transport studies in PVA: NH4CH3COO gel polymer electrolytes	C. P. Singh, P.K. Shukla and S.L. Agrawal	High Performance Polymers	0954-0083
Vibration assisted electrical arc machining of 10% B4C/Al metal matrix composite	Pankaj K Shrivastava	Journal of Mechanical Engineering Science	2041-2983
A review of plants used in ethnoveterinary medicine in central India	Sikarwar R.L.S.; Tiwari A.P.	Indian Journal of Traditional Knowledge	0975-1068
Spatio-seasonal variations in the faecal bacterial community of Zulu sheep grazing in communally managed rangeland	Arvind K. Gupta	South African Journal of Science	1996-7489
Performance Evaluation of Electrical Discharge Abrasive Grinding Process using Grinding Ratio	Pankaj K Shrivastava	Proceedings of the on System Modeling and Advancement in Research Trends	2473-2001
Appraisal of genetic variability for different quantitative traits in kharif maize (Zea mays L.) genotypes	Bineeta Devi	Electronic Journal of Plant Breeding	0975- 928X



History and footprints of plant explorations in Indian Subcontinent.	R.L.S. Sikarwar	Jour. Indian Bot. Soc. 100:1-17.	2455-7218
A bird's eye view of plants used as toothbrush in India: past and present.	R.L.S. Sikarwar	Journal Traditional and Folk Practices 8(2): 47-56.	2278-5906
Tree species used as Fodder in Madhya Pradesh.	R.L.S. Sikarwar	Jour. Non- Timber Forest Products 27 (3): 178-186.	0971-9415
Performance Evaluation of Tractor Operated Furrow Irrigated Raised Bed Seed Drill for Chickpea Production.	Ajeet Sarathe	Adv. Biores.	0976-4585
Ion Transport Studies in PVA: NH4CH3COO Gel Polymer Electrolyte, High Performance Polymer; 32 (2020) 209-219.	C. P. Singh	High Performance Polymer	0954-0083
Optimization of EDM process of titanium alloy using EPSDE technique	Pankaj K Shrivastava	Multiscale and Multidisciplinary Modeling, Experiments and Design	2520-8160
Design and optimization of EDM using metal matrix composite by Genetic algorithm and Jaya algorithm	Pankaj K Shrivastava	International Journal of Innovative Technology and Exploring Engineering	2278-3075
Factors Influencing Capacity Utilization of Mechanical Resources in Construction Industries	Pankaj K Shrivastava	Journal of Recent Technology and Engineering	2277- 3878.
Phylogenic Study to Find Genetic Diversity of Wildly Growing Phyllanthus emblica in Vindhya Region	Deepak Mishra	Journal of Advanced Scientific Research	0976-9595



Molecular Fingerprinting	Shailendra	Bioscience	0973-1245
of Indian Medicinal Tree	Singh Yadav	Biotechnology	
Saraca asoca using RAPD	and Ashwini A.	Research Asia	
Markers	Waoo		
Prognostication of	Charu Vyas	Current	2211-
Bioremediation Requisite	and Ashwini A.	Biotechnology	551X
Around Industrially	Waoo		
Contaminated			
Environment: A Review			
Construction of	Pandey,	Current	2211-
Phylogenetic Tree of Coat	Jyoti; Garg,	Biotechnology	551X
Protein Gene Encoded by	Rajesh; Waoo,		
Begomoviruses to Detect	Ashwini A.		
Yellow Mosaic Viruses			
Infecting Soybean in Satna			
Pharmacognostic review	Prabhakar	European	2063-5346
on annona squamosa linn	Tiwari, Madhu	Chemical	
	Gupta, Surya	Bulletin	
	Prakash Gupta		
A comprehensive review	Neelam Singh,	International	0975-2366
on challenges in paediatric	Priya Diwedi,	Journal of	
dosage form	Pooja Chauhan,	Pharmaceutical	
	Durgesh kumari	research	
	Gupta, Surya		
	Prakash Gupta		

### 4.6.3 Books & Book Chapters

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

Name of the teacher	Title of the book published	Title of the chapters published	Name of the publisher
Arpit Shrivastava	Who was he		Vandana
			publication
Shampi jain &	Advances in		Empyreal
Neeraj Verma	agriculture for		publishing
	doubling of		house
	farmers,		
	income		



CK. Chandrakar,	Advances in	Performance of	Empyreal
M. C. Bhambari,	agriculture for	integrated farming	publishing
Sanjeev Singh, K.	doubling of	system models for	house
K. Pandey	farmers,	improving	
	income	profitability and	
		livelihood of	
		marginal farmers of	
		kawardha district of	
		chhattisgarh	
Virendra kumar	Advances in	Economic analysis	Empyreal
vishwakarma,	agriculture for	of income and	publishing
Prem Ratan	doubling of	employment	house
Pandey	farmers,	generation on	
	income	integrated farming	
		systems in vindhya	
		region of m.p.	
Gupta, R.,	Advances in	Influence of	Empyreal
Hardaha M.K.,	agriculture for	different irrigation	publishing
Singh V. and	doubling of	and fertigation levels	house, india
Sarathe, A.	farmers,	on growth and yield	
	income	of garlic under drip	
		fertigation system,	
		advances in	
		agriculture for	
		doubling of farmer's	
		income, empyreal	
		publishing house,	
		india,	
Rajesh Gupta,	Advances in	Performance of ridge	Empyreal
A.L. Basediya,	agriculture for	and furrow system	publishing
Rajesh Kumar	doubling of	on the growth and	house,
Mishra, Ajeet	farmers,	yield attribution of	india.
Sarathe	income	soybean in malwa	
		region of madhya	
		pradesh, advances in	
		agriculture for	
		doubling of farmer's	
		income,	



Gupta R., Singh	Advances in	Comparative	Empyreal
A., Kumar R. and	agriculture for	performance of	publishing
Sarathe A.	doubling of	different seed bed	house,
	farmers,	configurations in	india,
	income	soybean cultivation	
		in mandsaur district	
		of madhya pradesh	
Champiiain 0	Recent		Emany month
Shampi jain &	research in		Empyreal
neeraj verma			publishing house
	agriculture for		nouse
	doubling the farmers		
Charu vyas*,	income Recent	Bioremediation: an	Empyreal
ashwini a. Waoo	research in		publishing
ashwiii a. waoo		innovative approach for reclamation of	house
	agriculture for		nouse
	doubling the farmers	agricultural land to sustain farmers'	
T	income	income	Г 1
Tripathi, R.C. and	Recent	Agro forestry and	Empyreal
S.S. Bisarya	research in	landscaping:	publishing
	agriculture for	sustenance of	house
	doubling the	ecosystem for better	
	farmers	livelihood	
D 1 " 1/"	income	C 1	Б 1
Balaji Vikram,	Recent	Study on effect of	Empyreal
Purnima Singh	research in	different pre-	publishing
Sikarwar	agriculture for	treatments on	house
	doubling the	physico-chemical	
	farmers	properties and	
	income	organoleptic quality	
		of bael candy (aegle	
77' 1 77	D	marmelos correa.)	
Virendra Kumar	Recent	Effect of blanching	Empyreal
Pandey	research in	of red cabbage on	publishing
	agriculture for	water borne	house
	doubling the	microbes	
	farmers		
	income		



Ayodhya pandey*	Recent	Character	Empyreal
, R.S. Gaur, R.K.	research in	association and path	publishing
Pandey, S.K.	agriculture for	coefficient analysis	house
Singh and S.P.	doubling the	in linseed (linum	
Mishra	farmers	usitatissimum 1.)	
	income		
Ayodhya p.	Recent	Estimation of	Empyreal
Pandey*, rajbeer	research in	variability	publishing
singh gaur, s.	agriculture for	parameters for yield	house
Singh and n.	doubling the	and its components	
Verma	farmers	in yellow sarson	
	income	[brassica rapa var.	
		Yellow sarson]	

#### 4. 7. Community-Focused Research and Extension Activities

Community engagement was a core aspect of AKS University's research strategy. In particular, the university's Rural Agriculture Work Experience (RAWE) Programme facilitated direct support for local farmers. As part of this program, the university adopted 35 villages in the Satna district, providing training on advanced farming techniques and modern agricultural practices. This initiative highlighted the university's commitment to using research to drive socioeconomic development in the region.

#### 4.8. Research Conferences, Seminars, and Workshops

AKS University hosted various conferences, seminars, and workshops to promote knowledge exchange, skill development, and networking opportunities for researchers. These events covered topics like biotechnology, sustainable agriculture, and engineering advancements, providing a platform for researchers to showcase their work and receive feedback from peers. Additionally, faculty and students were encouraged to participate in national and international conferences, broadening their exposure and building connections with the global academic community.

Title of the Conferences/ Webinar/Seminars/ Workshops	Date	Organized by
National Webinar on "Introduction to Intellectual Property Rights"	25-Jun-20	IPR Cell AKSU



An International Webinar on New Research Trends on Functional Physics (NRTFP-2020)	01- 04 Jul-20	Faculty of Basic Science
International Webinar on High Performance Thin Layer Chromatography: Theory Instrumentation & Application	03-Jul-20	Department of BioTech
National webinar on "Transforming India through nurturing demand driven innovations"	07-Jul-20	IPR Cell AKSU
National webinar on "Food Law and the requirements in Food Testing in India"	08-Jul-20	Department of Agri. Engg. & Food Technology
National Webinar on " Decentralized Economy & Swadeshi"	10-Jul-20	Department of Management Department of Commerce
National Webinar on "Significance and Current Status of Standards in Indian Pharmacopoeia"	10-Jul-20	Department of Pharmacy
National Webinar on "The coal Industry in the next decade with special reference to eastern coalfields limited in respect of productivity, safety & CSR."	13-Jul-20	Department of Mining Engineering
webinar on "Career opportunity in Electrical engineering"	14-16 Jul-20	Department of Electrical Engg.
Create your Dream World through Neuro Linguistic Programming (NLP)	16-Jul-20	Department of CSIT
International Webinar Recent Innovations in Chemical Sciences (RICS-2020)	18- 20Jul-20	Department of Chemistry
Mines Safety in India	20-Jul-20	Department of Mining
Webinar Series 2020, International Webinar on " The role of Yoga in developing overall personality of students"	20-Jul-20	Department of Education Department of Art
National Webinar on "Mines Safety In India"	20-Jul-20	Department of Mining Engg



E-Chaupal on "Challenges and solutions to the growth and unemployment in Indian economy during Covid-19"	23-Jul-20	Faculty of Agri. Sci. & Tech.
National webinar on "Covid19 is a threat	24-Jul-20	Faculty of
or opportunity for business."		Management
		Faculty of Commerce
Raw Materials Security of SAIL &	27-Jul-20	Department of
Mining Trend	27 341 20	Mining Engg
Build Your Career in Robotics and Winning the World with Wireless	27-Jul-20	Department of CSIT Department of Electrical Engg
E - Chaupal on "Strengthening Agricultural Extension and Advisory System"	27-Jul-20	Department of Agri
National Webinar on "Raw Materials Security of SAIL & Mining Trend"	27-Jul-20	Department of Mining Engg
National Webinar on "Build Your Career in Robotics and Winning the World with Wireless"	27-Jul-20	Faculty of Engg. & Tech.
A webinar, on "Way of life	28-Jul-20	Department of Art
national webinar "Data Collection, Method, Types and Data Analysis"	30-Jul-20	Department of CSIT
Webinar Sustainable Developmet of iron Ore Mining	31-Jul-20	Department of Mining Engg
National Webinar on "Sustainable	31-Jul-20	Department of
Development of Iron Ore Mining"		Mining Engg
E-learning series,a program on "Container & Kubernetes"	07-Aug-20	Department of CSIT
National Webinar on "Forensic Accounting – Skeptical Skills to Detect Fraud"	10-11 Aug-20	Faculty of Management Faculty of Commerce
a National Webinar on "MSME & Atmnirbhar Bharat"	13-Aug-20	IPR Cell



National Webinar on Plastic & E-Waste	14-Aug-20	Department of
Management: A challenge to clean	C	EVS
Environment.		Department of
		CSIT
"Conniving Corona – changes in the Post	17-Aug-20	Department of
Covid Business World"	C	Pharmacy
Webinar Series 2020: Challenges and	19-Aug-20	IPR Cell
Opportunities in Life Science for self-	S	
sustaining life security		
"National Education Policy 2020: The	03-Sep-20	IPR Cell
Brighter Future of Education"	1	
	04 9 20	Danastasantas
National Webinar on "Challenges of	04-Sep-20	Department of
Cyber Security, Faced by Youth in Our		CSIT
Society"	07.0	D
National Webinar on "Pragmatic	05-Sep-20	Department of
approach in quality construction of roads		Civil
in rural sector"		Department of
	07.000	Cement
Next Generation	07-08 Sep-20	Department of
Sequencing Technology		BioTech
Gene Editing: CRISPR	09-10 Sep-20	Department of
Technology		BioTech
Genomics-Assisted	12-13 Sep-20	Department of
Strategies for climate		BioTech
resilient crops		
Biofuels: The future of	14-15 Sep-20	Department of
moving world		BioTech
"Advance Manufacturing Process of	15-30Sep-20	Department of
Portland Cement"		Civil
		Department of
		Cement
Fermentation	17-18Sep-20	Department of
Technology: Microbial		BioTech
Technology for Industries		
and Bioprocessing		
Intellectual Property	19-Sep-20	IPR Cell AKSU
Rights and Patenting		
Bioinformatics for	22-Sep-20	Department of
Metagenomics		BioTech
Molecular Docking and	23-24Sep-20	Department of
Drug Designing		BioTech



Recent Advances in Molecular Biology	28-Sep to 02-	Department of
Techniques, Real Time PCR and	Oct-20	BioTech
Sequencing		
Probiotics and Immune System	03-Oct-20	Department of
		BioTech
		Department of
		Pharmacy
Microbial Biodiversity: Source of Novel	05-06 Oct-20	Department of
Antimicrobial therapeutics and		BioTech
Industrially important Enzymes		
Rapid Diagnostics: Detection of	08-Oct-20	Department of
Infectious Diseases		BioTech
"Handmade Silk Thread Jewelry.	09 -11 Oct-20	Department of
		Art
New Insights in the development of	12-Oct-20	Department of
novel Biofertilizers and Biopesticides		BioTech
Stem Cell Engineering	13-Oct-20	Department of
		BioTech
Vaccine Designing and Development	15-Oct-20	Department of
		BioTech
Plants of Opportunity: Source of novel	16-Oct-20	Department of
drug candidates for emerging diseases		BioTech
Plant Tissue Culture: Scope and	17-Oct-20	Department of
Opportunities		BioTech
Scope, Career and Entrepreneurship in	20-Oct-20	Department of
Biotechnology		BioTech
R&D Initiatives in Coal Mining	21-Oct-20	Department of
		Mining
National Mining Day	31-Oct-20	Department of
		Mining
3 Days Webinar on "Self reliant India."	03-05 Nov-20	IQAC AKSU
webinar on "Life Beyond Cancer"	10-Dec-20	Department of
		BioTech
Workshop to celebrate ENERGY	14-Dec-20	All Engg/Basic
CONSERVATION DAY		Sci/Ag Engg
Two weeks workshop on Advance Linux	15-Dec-20	Department of
& System Automation		CSIT







# **National Education Policy 2020**The Brighter Future of Education

Monday, 31st August 2020 | 12:30 PM



Dr. Ramesh Pokhriyal 'Nishank' Hon'ble Minister, Ministry of Education, Government of India



Mr. Kunwar Shekhar Vijendra Co-Chairman, ASSOCHAM National Council on Education & Chaeceller, Shobbit University



Dr. Prashant Bhalla Chairman, ASSCCHAM National Council on Education & President Manay Rachna Educational Institution



Dr. Niranjan Hiranandan President, ASSOCHAM & Managing Director



Mr. Vineet Gupta Co-Chairman, ASSOCHAM National Council on Education & Founder & Trustee, Ashoka University



Prof. (Dr.) Mangesh T Karad Executive President MIT ADT University, Pune



Er. Anant Kumar Soni Member, ASSOCHAM National Counci on Education, Pro Chancellor &



Ms. Divya Lal Member, ASSOCHAM National Counc on Education, Managing Director Flinteen Education P. Ltd.



Prof. (Dr.) Sanjay 8 Chordiya Member, ASSOCHAM National Council on Education, Foundar President & Chairman Suryadatta Education Foundation



Mr. Neeraj Arora Senior Director & Head ASSOCHAM National Counc

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#### ORGANIZED BY: ASSOCHAM NATIONAL COUNCIL ON EDUCATION

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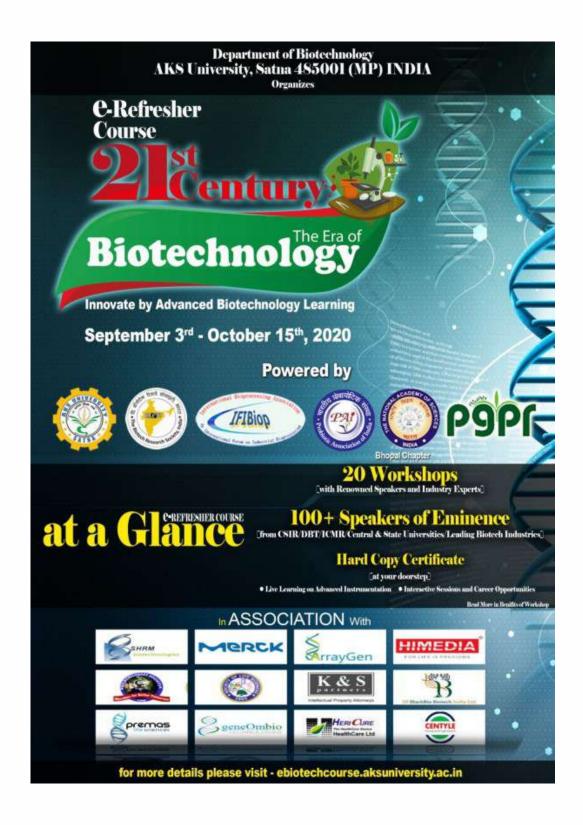




















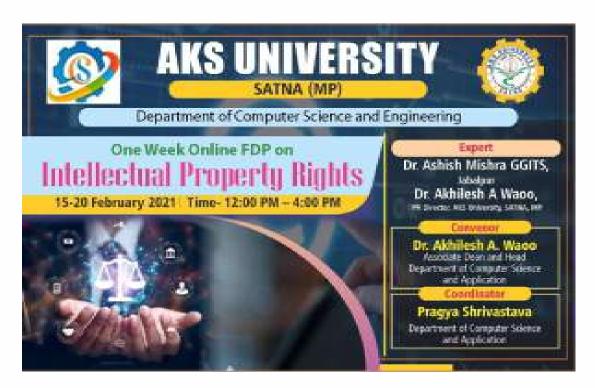


#### 4.9. Faculty Development Programmes

Faculty Development Programs (FDPs) play a crucial role in enhancing the quality of education and research in an education institution. Such kind of programs are designed to equip faculty members with the latest teaching methodologies, research skills, and professional development opportunities There were two Faculty Development Programmes (FDP) were organized by AKS University in Satna in 2020-21. The key highlighting their importance: Enhancing Teaching Quality: FDPs provide faculty with updated pedagogical techniques and tools, allowing them to create more engaging and effective learning environments. This leads to improved student outcomes and higher levels of student satisfaction.

To keep the above-mentioned view as well as considerations of past pandemic effects of Covid-19 AKSU AKSU organized two major FDP foe wellness of the teaching faculty members as follows-

- Six Days, Online Faculty Development Programme on Wholistic Health Benefits of Yoga to Encounter COVID-19, held from – 07<sup>th</sup> to 12<sup>th</sup> September 2020.
- 2) One-week, Online Faculty Development Programme on Intellectual Property Rights held from 15<sup>th</sup> to 20<sup>th</sup> February 2021.





#### Chief-Patron

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

#### Patrons

Dr. R.S. Tripathi (Pro VC (Academics), AKS University, Satna (M.P.)

#### Convener:

Dr. Dillip Kumar Tiwari (Head, Department of Yoga, AKS University, Satna (M.P.)

#### Coordinator

Mr. Rajeev Bairagi Department of Arts, AKS University, Satna (M.P.)

Mrs. Bharti Tripathi Department of Arts, AKS University, Satna (M.P.)

#### SIX DAYS

Online Faculty Development Programme on
"Wholistic Health Benefits of Yoga
to Encounter COVID 19"

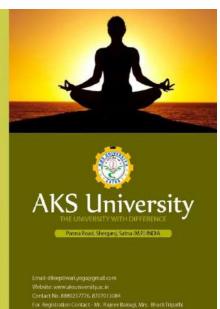


From 07 SEP 2020 to 12 SEP 2020

Organized by Department of Yoga, AKS UNIVERSITY SATNA

#### **Duration and Delivery**

Day	6
Mode	Online
Ouration	02:00 Hrs. Per Day
Timing	06:00 AM to 08:00 AM



#### Why This FDP?

- · To educate faculty members about the importance of yoga for physical and mental health.
- and meditation techniques that can be easily integrated into
- educators during the COVID-19 pandemic.

	Programme Outline			
Day-1 07-SEP-2020	Dr. Dilip Kumar Tiwari	Introduction to Yoga and its Relevance in the COVID era.		
Day-2 08-SEP-2020	Dr. Dhirendra Singh	Yoga Asanas for Physical Health and Immunity		
Day-3 09-SEP-2020	Dr. Samardeep Singh	Pranayama for Respiratory Health and Vitality		
Day-4 10-SEP-2020	Dr. Vinay Patel	Meditation and Mindfulness for Mental well being		
Day-5 11-SEP-2020	Dr. Ratnesh Pandey	Yoga for Stress Management and Emotional Balance		
Day-6 12-SEP-2020	Dr. Dilip Kumar Tiwari	Integrating Yoga into daily Life for Long term Health.		



#### 5. AKS University Achievements

In the academic year 2020-21, amidst the challenges posed by the COVID-19 pandemic, AKS University, Satna, achieved significant milestones that underscored its resilience, adaptability, and dedication to academic excellence and societal contributions. Despite disruptions, the university excelled in research, innovation, and academic growth, earning recognition in regional and national forums. A robust research culture flourished, with faculty and students undertaking projects in biotechnology, environmental sciences, agricultural technology and engineering. Many of these projects, particularly those focusing on sustainable agriculture and renewable energy, gained prominence for addressing pressing environmental and community challenges during the pandemic.

The university swiftly transitioned to online education, integrating virtual learning tools to sustain academic programs and adopting outcome-based education and project-based learning approaches to maintain student engagement and skill development. Faculty and students adapted by participating in virtual conferences and publishing extensively, contributing to the institution's visibility in the academic community even under pandemic constraints. Recognitions included awards for excellence in private university education and rural innovation, further solidifying AKS University's position as a leading institution in Madhya Pradesh.

AKS University's Rural Agriculture Work Experience Programme played a crucial role during the pandemic, supporting local farmers with training in modern farming techniques to ensure food security and sustainable practices. Community engagement extended to COVID-19 relief efforts, including awareness campaigns, distribution of masks, and vaccination drives, reflecting the university's commitment to social responsibility. Through these accomplishments, AKS University demonstrated its ability to adapt and thrive, continuing to advance education, research, and community service during an unprecedented global crisis.



### 5.1 Award & Recognition

## 5.1.1 Number of awards received for research/innovations by the institution/teachers/research scholars/students during the year 2020-21

Name of the awardee	Name of the award	Name of the awarding body	Category of award (innovation/ technology transfer etc.)
Dr. Ashwini A Waoo	Bentham Ambassador	Bentham Science Publication	Innovation
Dr. Abhishek Singh	Best Paper Award	Society of Horticulture Research and Devlopment, During Indian Hoticulutre Summit- 2020 at Chitrkoot (M.P)	Innovation
Dr. R.L.S. Sikarwar	Pushpangadan Biodiversity Access and Benefit Award 2020	Dr. Palpu Pushpangadan Ceritable Society & CSIR- National Botanical Research Institute, Lucknow	Innovation
Dr. Virendra Tiwari	National Eminent Researcher Award	I2OR Acadmy India	Innovation
Dr. Surya Prakash Gupta	SPER Principal of the Year Award 2020	Society of Pharmacutical Education & Research SPER 9 <sup>th</sup> Annual International Conference & Exhibition SPER-2020 organized on 28-29, 2020 at Department of Pharmaceutical Sciences & Technology, AKS University, Satna	Innovation
Virendra Kumar Pandey	Research excellence 2020	Institute Of Scholars	Innovation



Sheelendra	National	I2OR Acadmy India	Innovation
Kumar	Eminent		
Upadhyay	young		
	Scientist		
	Award		
C1 1 1	**		T
Sheelendra	Young	Ek Nayi Rah Foundation	Innovation
Kumar	Research	(ENRF), Etawah U.P	
Upadhyay	Fellow Award		
Sheelendra	Young	Asian Biological	Innovation
Kumar	Scientist	Research Foundation	
Upadhyay	Award	(ABRF), Prayagraj (India)	
Dr.	Biotechnology	Society of Life Sciences,	Innovation
Kamlesh	Excellence	Satna (M.P)	
Choure	Award		

## 5.1.2 Students qualifying in state national international level examinations during the last five year

Name of the qualifying student	Level of Exam	Name of competitive examination
Ashutosh Mishra	National	GATE
Arun Kumar Chakravarti	National	GATE
Tarun Sakre	National	GATE
Akhil Kumar Gautam	National	CPCT



#### 6. Infrastructure & Resource Development

AKS University, Satna, continued its commitment to infrastructure and resource development, adapting to the challenges posed by the COVID-19 pandemic. The university further enhanced its IT Infrastructure significant uses of laboratories, including advanced biotechnology labs, engineering workshops, and environmental science facilities, which supported limited on-campus research and practical training under strict safety protocols. These facilities enabled ongoing research in critical areas such as sustainable agriculture, renewable energy and water management.

To address the pandemic's impact, AKS University significantly upgraded its digital infrastructure. An in-house system was developed to deliver regular online classes, conduct internal assessments, and facilitate end-semester examinations remotely. Faculty members created and uploaded over 35,000 video lectures and provided online study materials to ensure uninterrupted learning for students. The library resources were also expanded, offering an enriched collection of e-books, journals, and online databases, complemented by a developing e-library system. Additionally, ICT-enabled classrooms and virtual labs played a pivotal role in delivering an interactive, technology-driven learning experience.

Through these measures, AKS University successfully transitioned to a hybrid learning environment, ensuring that students received a quality education while adhering to pandemic safety guidelines. This comprehensive approach reinforced the university's commitment to academic excellence and student-centric resource development.

#### 6.1. Student Support and Progression

In 2020-21, AKS University placed an increased focus on student support and progression to address the unique challenges brought on by the COVID-19 pandemic. The university expanded its mentorship programs, with faculty mentors offering personalized guidance through virtual interactions to help students navigate academic and career challenges. Online counselling services were introduced to address mental health concerns, including stress and anxiety caused by the pandemic.

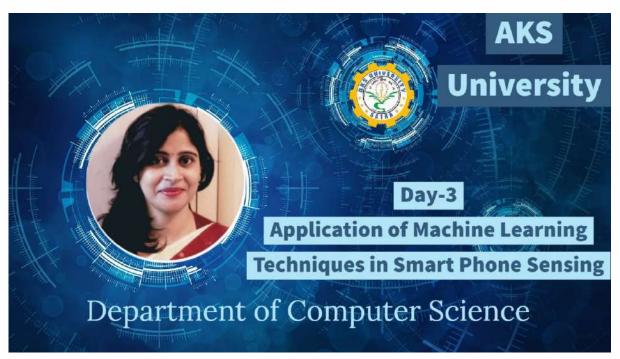


The university conducted virtual workshops and training sessions focused on employability skills such as communication, interview techniques, and resume building. Industry-oriented internships and placement programs were adapted to online formats, connecting students with leading companies and ensuring continued career development opportunities. Extracurricular activities were reimagined for the virtual space, with online cultural events, competitions, and student club activities fostering creativity and engagement.

These efforts ensured that students remained motivated and equipped to succeed despite the disruptions of the pandemic. AKS University's proactive support system not only helped students thrive academically and professionally but also underscored the institution's dedication to nurturing socially responsible, well-rounded graduates.









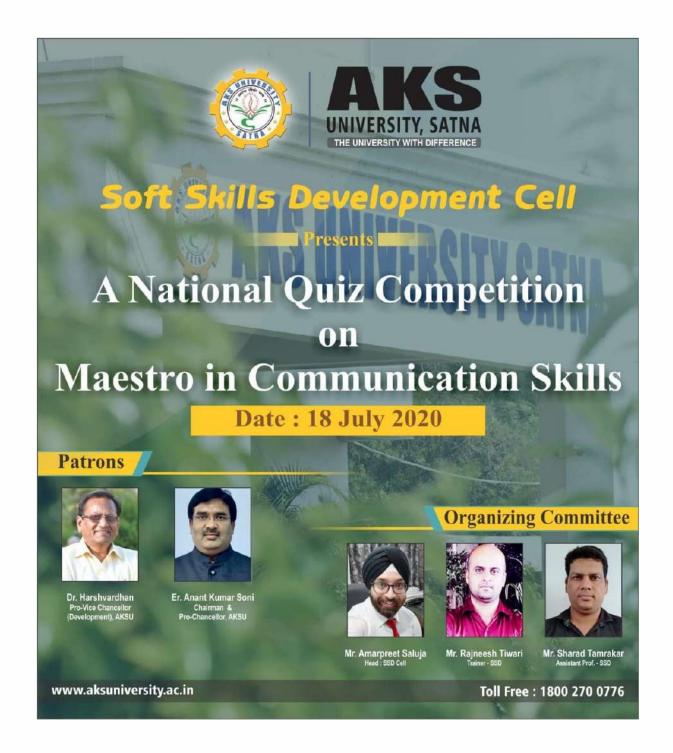


















#### 6.2 Student Achievement in Cocurricular Activities

#### **6.2.1** Cultural Clubs - 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.



Student performing Spondan festival



Student performing in InteruniversityZonal Festival



**Student Performing in Spondan Festival** 



Student performinat at interuniversity youth festival

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) during the last five years

Year	Name of the award/ Medal	Team / Individual	Inter- university / State / National / International	Name of the event
2021	Winner	Individual	Inter University	Singing Competiton/ Independence Day Talent Show 2021 organized by R.P. Square Dance Studio, Satna on 15 August 2021
2021	First Rank	Individual	National	Speech Competition/ National Youth Parliament 2020-21 organized By Neharu Yuva Kendra, Satna (M.P.) Ministry of Youth Affairs and Sports, Government of India)



#### 7. Extension Outreach Activity

The academic year 2020-21 saw AKS University, Satna, actively contributing to community welfare through a variety of extension and outreach activities tailored to address the challenges posed by the COVID-19 pandemic. The university leveraged its resources and expertise to support the local community, focusing on awareness, health, and socio-economic resilience.

#### **Key Activities and Initiatives**

#### **COVID-19 Awareness Campaigns**

- AKS University conducted virtual and on-ground awareness programs to educate the community about COVID-19 safety measures, the importance of masks, social distancing, and vaccination.
- Pamphlets, social media posts, and webinars were used to disseminate credible information about preventing the spread of the virus.







#### **Distribution of Essential Supplies**

- The university distributed masks, hand sanitizers, and hygiene kits to vulnerable populations, including rural communities and local frontline workers.
- Dry rations and food packets were provided to economically disadvantaged families affected by the pandemic.

#### **Support for Vaccination Drives**

- AKS University collaborated with local health authorities to support vaccination campaigns by organizing vaccination camps on its premises and mobilizing volunteers.
- Faculty and students participated in campaigns to encourage vaccine acceptance, addressing vaccine hesitancy in rural areas.

#### **Rural Agriculture Work Support**

- The university's Rural Agriculture Work Experience Programme adapted its operations to provide remote guidance to farmers on modern farming techniques.
- Online sessions on crop management and soil health were conducted, ensuring that agricultural activities remained uninterrupted during the pandemic.



#### Mental Health and Counseling Initiatives

- Recognizing the psychological impact of the pandemic, the university organized online counseling sessions and webinars on mental health for students and the community.
- Topics such as stress management, coping strategies, and the importance of mental well-being were covered by experts.

#### **Impact on the Community**

These initiatives significantly benefitted the local community, especially those in rural and economically disadvantaged areas. By addressing immediate needs such as health, safety, and food security, while also providing educational and psychological support, AKS University underscored its commitment to social responsibility.

Through these extension and outreach activities, AKS University not only mitigated the adverse effects of the COVID-19 pandemic but also reinforced its role as a proactive and socially accountable institution dedicated to community welfare.













#### 8. Conclusion

The year 2020-21 remembered as a period of unprecedented challenges due to the COVID-19 pandemic, which disrupted educational systems worldwide. At AKS University, Satna, the pandemic not only tested our resilience but also provided an opportunity to accelerate innovation, adapt to new modes of learning, and redefine our institutional priorities. Despite the significant challenges, we are proud of the way our university has navigated this crisis, demonstrating flexibility, determination, and a commitment to maintaining the quality of education for our students.

Educational Continuity and Digital Transformation The onset of the pandemic in early 2020 forced us to close our physical campuses, but we swiftly transitioned to online learning platforms to ensure the continuity of education. Our faculty members and students embraced virtual classrooms, and through various digital tools and platforms, we ensured that learning continued uninterrupted. The transition to remote teaching was supported by enhanced digital infrastructure, including the adoption of learning management systems, virtual labs, and interactive webinars. This shift also led to the rapid upskilling of faculty members, who adapted to new technologies and teaching methodologies.

Though there were initial challenges related to access to technology and the internet for some students, we worked to bridge these gaps by providing online resources, extending deadlines, and offering support for students facing difficulties in adapting to the new format. We also ensured regular communication through virtual mentoring, online counselling and academic advising to support the well-being and academic progress of our students.

Research and Innovation During the Pandemic While the pandemic posed challenges to traditional research activities, it also opened new avenues for research, particularly in areas related to public health, biotechnology, digital learning, and community welfare. Many of our faculty members and research scholars focused their efforts on projects that addressed the impact of COVID-19, such as developing health-related solutions and studying the socio-economic consequences of the pandemic. Our university continued to engage in high-quality research and innovation, contributing to the larger body of knowledge and supporting the nation's fight against the pandemic.

Operational Adjustments and Safety Measures The safety and well-being of our students, faculty, and staff have remained our top priority. We took proactive measures to ensure that those who had to be on campus were safe, implementing strict hygiene protocols, social distancing, and



regular health checks. For students and staff who were unable to return to campus, we maintained flexibility in the delivery of education and administration through online channels.

In terms of financial management, the pandemic required us to reassess our budget and allocate resources efficiently. Despite the financial constraints faced by many educational institutions, we remained committed to providing high-quality education and support services. We focused on cost optimization and prudent financial management, ensuring that the university's operations continued smoothly.

**Student Engagement and Extracurricular Activities** While the pandemic curtailed physical extracurricular activities, we found innovative ways to engage our students. Virtual events, online cultural programs, webinars, and digital workshops helped maintain the vibrant campus life that AKS University is known for. These events fostered a sense of community and helped our students remain connected despite physical distances.

**Looking Ahead:** A Resilient Future As we close the academic year 2020-21, we reflect on the immense challenges faced but also the remarkable achievements made in adapting to the new normal. The experiences of this year have made us stronger, more adaptable, and more committed to innovation in education. The lessons learned during the pandemic will continue to guide our future strategies as we move toward greater digital integration, hybrid learning models, and an even stronger focus on student welfare.

We are confident that AKS University, Satna, will emerge from this crisis not only intact but in a stronger position to face future challenges. The resilience shown by our faculty, staff, and students during this period has reaffirmed our commitment to excellence in education, research, and community engagement. With renewed focus and determination, we look forward to shaping the future of higher education in the post-pandemic world.

In conclusion, while the year 2020-21 was a time of adversity, it also highlighted the strength and adaptability of AKS University. Together, we have weathered the storm, and our path forward remains one of growth, innovation, and unwavering commitment to our educational mission.



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