

ANNUAL REPORT 2020-21



AKAL UNIVERSITY

(Established under the Government of Punjab Act No. 25 of 2015)

Talwandi Sabo, District Bathinda (Punjab)

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+91-7087775533, 7087775544, 7087775566, 7087775588

Website : www.auts.ac.in E-mails : info@auts.ac.in

Founders Vision



Sant Attar Singh Ji



Sant Teja Singh Ji

“Modern scientific education alone will not serve the humanity well, until and unless it is amalgamated with Braham Vidya (Spiritual Education).”

Mission



Baba Iqbal Singh Ji
Chancellor, Akal University

“To establish permanent peace in the world through value based scientific education and spiritual rejuvenation creating good global citizens.”

VICE-CHANCELLOR'S MESSAGE



As we complete six years of operation under the banner of Akal University, we recognize the solid backing of our sponsoring body, 'the Kalgidhar Society' that has a distinction of imparting quality education from decades in India. From the date of its inception the University has been on the path of delivering value education through cutting-edge research and innovation as well as enriching global exposure in its numerous fields of academics. It has successfully managed to hold aloft its tradition even while keeping up with the emerging trends.

Given the context of the pandemic, we need to redefine our teaching-learning strategies to offer the best pedagogic experience to our students. Our university boasts of faculty with a high degree of knowledge and commitment to offer the best in teaching and research. As a pioneer in flexible learning for more than 5 years, we are fortunate that the University already has robust systems in place to facilitate online teaching and learning to prevent the loss of studies. Meanwhile, our faculty and administration strived to bring the best to the virtual classrooms.

Our faculty, research scholars and students have been consistently working hard bringing laurels to the University. This annual report captures some of the moments, milestones and musings in the year gone by. Considering the age of the University (only six years) and the global demands, the achievements accomplished by the faculty, research scholars and students are applaudable, but the complete satisfaction puts full stop to progress. Hence, the fraternity of Akal University is committed to achieve more in the forthcoming years and I am confident that the University would establish itself as one of the leading universities both at national and international levels by fulfilling its vision and mission of imparting quality education accessible to all.

ABOUT THE UNIVERSITY



Three centuries ago, the tenth Master, Guru Gobind Singh Ji stayed at Talwandi Sabo, finalized the compilation of Guru Granth Sahib Ji and prophesied that this place will manifest as Guru Ki Kashia great Centre of teaching and learning from where will emerge great scholars of Sikhism. About two centuries thereafter, establishment of Gurumat Vidyalaya by Sant Atar Singh Ji Maharaj was the first step in this direction. About a century thereafter, establishment of Akal University, Talwandi Sabo under the leadership of Baba Iqbal Singh Ji Baru Sahib Wale was culmination of what the tenth Guru prophesied about three centuries ago. The University has started its sixth academic session

this year. The mission and vision of the University is not merely to impart literacy but also to provide high quality spiritual value-based education leading to holistic development of complete human beings who will propagate the message of universal brotherhood and philosophy of interfaith wisdom enshrined in Sri Guru Granth Sahib Ji .

Unlike most of the educational entities having commercialized the higher education by operating like business ventures, the Akal University has mandated to uphold the three basic principles of higher education namely; Teaching, Learning and Research. Consequently, the University has started with Undergraduate and Postgraduate Honours courses and Ph.D programmes in basic sciences and languages namely Mathematics, Physics, Chemistry, Botany, Zoology, Psychology, Economics, Commerce, English and Punjabi. The University also offers BCA, B.Tech. (CSE), MBA, and four year Integrated B.Sc.-B.Ed./B.A.-B.Ed program.

Offering the three years Bachelor of Arts (Honours) Degree in Sri Guru Granth Sahib Studies is a unique programme of the University, probably first of its kind offered by any university in the country and abroad. The programme is fully residential and totally free including fee, boarding and lodging charges. The course aims not only to impart complete learning of the Holy Scripture but also to teach Guru Darbar Maryada, Sikh tenants, Sikh history and life and teaching of Sant Atar Singh Maharaj Mastuane Wale and other enlightened sages from different sects and religions of the world. Comparative study of different religions is an integral part of the course.

Magnificent building with ultra-modern facilities for teaching and research is the hallmark of the University. Wi-Fi campus, well equipped modern labs, internet linked smart class rooms, high tech well stocked library facilities,

CCTV cameras for special security of girl students, modern residential accommodation for teachers and separate hostel facilities for boys and girls, 100% healthy pure vegetarian diet, centralized RO system on all drinking water coolers, well-functional University transport services for staff and day scholars, drug free campus, sports and recreational facilities for boys and girls, and special fee concession upto Rs.1,09,000 per year per meritorious student are key features of the education system at the University.

The University has designed goal oriented course curriculum. The unique features of the same include choice based credit system, market oriented skill enhancement courses, special coaching classes for UGC-NET, ICS, Bank PO, SSC, UPSC and other competitive exams. The University adopted English medium for teaching and examination of the students. The University endeavors to enhance the communication skills of the students by making special efforts on improving the knowledge of English language. The University has also established English Language Lab to improve the writing & communication skills of the students.

To strive for excellence in teaching and research, all faculty members are UGC qualified with exceptional academic records and have earned their Doctorate and Post-Doctorates from top universities and institutions. Besides following students-teacher interactive mode of teaching, each student has been assigned a teacher mentor to take tutorial and to resolve his/her academic and personal problems. There is special provision of counselors to motivate, guide and address personal day to day issues and problems of the girl students.

The University has a firm resolve to provide a drug free environment and to create a disciplined campus life. In tune with the philosophy of Kalgidhar Trust, Baru Sahib, all efforts are being made to inculcate spiritual, moral and ethical values in the students to make them decent human beings and responsible citizens.

In due course, the University plans to start the great work of translation of the holy scripture in different languages of the world so that the seekers of spirituality from all over the world may submerge themselves in the ocean of divinity and parmarth and find the path of ultimate salvation enshrined in the holy scripture of Sri Guru Granth Sahib Ji and as blessed by the tenth Guru Sri Gobind Singh Ji Maharaj.

Statutory Bodies

GOVERNING BODY

Sr. No.	Name	Position
1.	Hon'ble Baba Iqbal Singh Ji (Chancellor)	Chairman
2.	Prof. Gurmail Singh (Vice-Chancellor)	Member
3.	Dr. Bhupinder Singh Saran Hospital, Mullanpur Dakha District Ludhiana (Punjab)	Three Members nominated by the Society out of whom two shall be eminent educationists
4.	Dr. H.S. Dhaliwal Vice-Chancellor Eternal University Baru Sahib (HP)	
5.	Dr. Gautam Singh Sikand #106, New Jawahar Nagar Jalandhar (Punjab)	
6.	Dr. Neelam Kaur Advisor Health and Education The Kalgidhar Society, Baru Sahib (HP)	Member (One Expert of Management or Information Technology)
7.	Prof. S.K. Chadha Professor University Business School Panjab University, Chandigarh	Member (One Expert Finance nominated by the Chancellor)
8.	Secretary of Higher Education, Punjab or his representative	Member
9.	Dr. P.S. Ahuja (Former Director General, CSI, GOI)	Member (One eminent educationist nominated by the Secretary Higher Education in consultation with the Chancellor)
10.	Dr. Sawarn Singh Registrar	Member-Secretary

BOARD OF MANAGEMENT

Sr. No.	Name	Position
1.	Hon'ble Baba Iqbal Singh Ji (Chancellor)	Chairman
2.	Prof. Gurmail Singh (Vice-Chancellor)	Member
3.	Dr. Davinder Singh Secretary The Kalgidhar Society	Two Members nominated by the Society
4.	Mr. Bhupinder Singh Amritsar Road, Opposite Gali No. 10, Moga	
5.	Director, Higher Education, Punjab or his representative	Member
6.	Dr. R.K. Kohli Vice-Chancellor Central University of Punjab Bathinda	Three Members, who are not the members of the society, nominated by the Society
7.	Dr. Neelam Kaur Baru Sahib	
8.	Col. P.P.S. Anand VPO : Baru Sahib Via Rajgarh, Distt. Sirmour (HP)	
9.	Prof. A.S. Ahluwalia Pro Vice-Chancellor Eternal University, Baru Sahib	Member from amongst the teachers nominated by the Society
10.	Dr. S.S. Advani Director (HR) Baru Sahib	Two Teachers nominated by the Chancellor as Members
11.	Dr. K.S. Sidhu Patiala	Member-Secretary
12.	Dr. Sawarn Singh Registrar	

ACADEMIC COUNCIL

Sr. No.	Name	Position
1.	Prof. Gurmail Singh (Vice-Chancellor)	Chairman
2.	Dr. Davinder Singh Secretary The Kalgidhar Society	Society Representative
3.	Dr. Neelam Kaur Advisor Health and Education The Kalgidhar Society Baru Sahib	Governing Body Representative
4.	Nominee of the State Government	Member
5.	The Dean Academic Affairs	Ex-officio
6.	The Dean Research	Ex-officio
7.	Deans of Faculties	Ex-officio
8.	Dr. K.K. Bhasin Professor Professor Emeritus NASI Platinum Jubilee Fellow and Former Dean Faculty of Science and Head, Department of Chemistry Panjab University, Chandigarh	Member
9.	Dr. A.S. Oberai Former Regional Director UNO (ILO), Geneva, Switzerland	Member
10.	Dr. Manmohan Gupta Professor Emeritus Department of Physics Panjab University, Chandigarh	Member
11.	Dr. A.S. Ahluwalia Professor Former Dean Faculty of Science, Dean Students Welfare and Head, Department of Botany Panjab University, Chandigarh	Member
12.	Dr. Pushpinder Syal Professor Department of English and Cultural Studies, Panjab University	Member

13.	Dr. S.K. Chadha Professor Former Head, University Business School and Director, Central Placement Cell, Panjab University, Chandigarh	Member
14.	Prof. Sukhjeet Singh Professor Director Internal Quality Assurance Cell (IQAC), Akal University, Talwandi Sabo, Distt. Bathinda	Member
15.	Dr. B.S. Sandhu Professor and Former Dean Academic Affairs, Registrar and Head, Department of Psychology Punjabi University, Patiala	Member
16.	All Heads of Departments	Ex-officio
17.	Registrar	Secretary Ex-officio

FINANCE COMMITTEE

Sr. No.	Name	Position
1.	Prof. Gurmail Singh (Vice-Chancellor)	Chairman
2.	Dr. Davinder Singh Secretary The Kalgidhar Society	Member
3.	Dr. Neelam Kaur Advisor Health and Education The Kalgidhar Society	Member
4.	Dr. Sawarn Singh (Registrar)	Member
5.	Chief Finance and Accounts Officer	Member-Secretary

OFFICERS OF THE UNIVERSITY

No.	Designation	Name of the Officer
1	Chancellor	Revered Baba Iqbal Singh Ji President The Kalgidhar Society
2	Vice-Chancellor	Prof. Gurmail Singh
3	Dean Academic Affairs	Maj Gen (Dr.) G.S. Lamba
4	Dean Research	Prof. S.S. Bhatti
5	Registrar	Dr. Sawarn Singh
6	Director IQAC	Prof. Sukhjeet Singh
6	HoD, Department of Botany	Dr. Arvinder Singh
7	HoD, Department of Zoology	Dr. Vikram S Rathor
8	HoD, Department of Physics	Prof. BirBikram Singh
9	HoD, Department of Chemistry	Dr. Sandeep Kumar
10	HoD, Department of Mathematics	Mr. Rajat Singla
11	HoD, Department of English	Dr. Shantanu Ghosh
12	HoD, Department of Commerce	Mrs. Pahuljot Kaur Sidhu
13	HoD, Department of Punjabi	Dr. Sandeep Singh
14	HoD, Department of Economics	Dr. Parveen Rani
15	HoD, Department of Psychology	Maj Gen (Dr.) G.S. Lamba
16	HoD, Department of Sri Guru Granth Sahib Studies	Dr. Tarsem Singh
17	Public Relations Officer	Mr. C.S. Mavi

ACADEMIC PROFILE

Akal University campus is spread over 40 acres of land with adequate infrastructure and learning resources to cater to the needs of the student community. The University has adopted and enriched the university curriculum from time to time, including the present Choice Based Credit System. It has adopted transparent teaching-learning and evaluation system. The University has a credible research, consultancy and extension base to cater to the needs of the higher education in all the academic programmes. The University has attempted to involve all the stakeholders i.e. students, parents, teachers, management and UGC to promote quality higher education with emphasis on skill enhancement and student-centric learning in the classrooms.

Academic Programmes

Sr. No.	Faculty	Department	COURSE		
			Under Graduate	Post Graduate	Ph.D.
1	Sri Guru Granth Sahib Studies	Sri Guru Granth Sahib Studies	B.A. (Hons.)@	---	---
2	Life Sciences	Botany	B.Sc.(Hons.) @	M.Sc.(Hons.)	Ph.D.
		Zoology	B.Sc.(Hons.) @	M.Sc.(Hons.)	Ph.D.
3	Physical Sciences	Physics	B.Sc.(Hons.) @	M.Sc.(Hons.)	Ph.D.
		Chemistry	B.Sc.(Hons.) @	M.Sc.(Hons.)	Ph.D.
4	Mathematics & Computational Science	Mathematics	B.Sc. (Hons.) @	M.Sc.(Hons.)	---
		Computer Science	BCA (Hons.),	---	---
5	Economics, Management & Commerce	Economics	B.A. (Hons.) @	M.A.(Hons.)	Ph.D.
		Commerce	B.Com.(Hons.)@	M.Com.(Hons.)	---
		Management	---	MBA	---
6	Indian and Foreign Languages	English	B.A.(Hons.) @	M.A.(Hons.)	Ph.D.
		Punjabi	B.A.(Hons.) @	M.A.(Hons.)	Ph.D.
7	Arts	Psychology	B.A (Hons.) @	M.A.(Hons.)	Ph.D.
8	Education	Education	B.A. B.Ed./ B.Sc. B.Ed. 4 year Integrated Program	---	---

Note: @: Integrated Program leading to M.Sc. (Hons.)-/M.Com. (Hons.)-/M.A. (Hons.)

Academic Calendar

Sr No	Schedule	FROM	TO	DAYS
	ODD SEMESTER			
1	Commencement of classes	22 Jul 2020	At 10.00 a.m.	
2	Teaching	22 Jul 2020	30 Nov 2020	93 days
3	End semester examination	12 Dec 2020	25 Dec 2020	13 days
4	Winter break	27 Dec 2021	31 Dec 2020	5 days
	Odd semester teaching days			93 days
	EVEN SEMESTER			
5	University reopen after semester examination	04 Jan 2021	At 9.00 AM	
6	Teaching	04 Jan 2021	05 May 2021	88 days
7	End semester examination	10 May 2021	31 May 2021	19 days
	Even semester teaching days			88 days
	Total teaching days during academic year 2020-21			181 days
	End semester examinations [13+19=32]			32 days

Faculty Strength

Sr. No	Department	Total Faculty members	PDF	From IITs/IISc/ NIPER/IISER	Ph.D.	Distinction (Gold Medal/Topper/ awardee)
1	Botany	7	1	-	7	5
2	Zoology	8	1	-	8	-
3	Physics	10	-	3	10	-
4	Chemistry	8	5	4	7	-
5	Mathematics	7	1	1	2	-
6	Economics	8	-	-	3	-
7	Commerce	7	-	-	4	1
8	English	7	1	-	5	-
9	Punjabi	6	-	-	2	4
10	Psychology	8	-	-	5	2
11	SGGS	3	-	-	2	-
12	CCE	3	-	-	1	-
13	Education	1	-	-	1	-
14	CSE	1	-	-	-	-
	Total	84	9	8	57	12

FACULTY PUBLICATIONS

Journal articles/Book Chapters

1. Alam, S. & Ahmad, F. (2021) Performative Retrieving of Tradition for Socio-Political Intervention: A Study of the Protest Theatre of Dario Fo, *Rupkatha Journal on Interdisciplinary Studies in Humanities*, Vol. 12, No. 6, pp. 1-13.
2. Alam, S., Khalid, Sadaf., Ahmad, F. & Keezhatta, M. (2021) Mocking and Making: Subjugation and Suppression of Marginalized and the Politics of Identity, *Journal of Education Culture and Society*, (accepted for publication).
3. Bhatnagar, A., Kaur, M., Dhillon, O. & Yadav, AS. (2021) Paddy cum fish culture: Growth performances of *Channa punctatus*, paddy yield and economics, *Journal of Applied and Natural Science*, Vol.13, No.1, pp.145-146.
4. Chahal, S., Gumber, D. & Kalra, H. (2021) On Autocentral Automorphisms of Finite p-Groups, *Results in Mathematics*, Vol. 76, pp. 30.
5. Dhillon, O. & Bhatnagar, A. (2020) Gut colonization and permanence of the probiotics in *Labeocalbasu* (Hamilton, 1822), *Egyptian Journal of Aquatic Biology & Fisheries*, Vol. 24, No.7, pp. 427-440.
6. Dhillon, O. & Bhatnagar, A. (2021) An economic and eco-friendly approach towards developing a sustainable growth promoting aquafeed for *Labeocalbasu* (Hamilton 1822), *Proceedings of the Zoological Society* (Springer).
7. Kaur, H. & Garg, N. (2021) Interactive Effects of Zinc-ArbuscularMycorrhizal (AM) Fungi on Cadmium Uptake, Rubisco, Osmolyte Synthesis and Yield in *Cajanuscajan* (L.) Millsp, *International Journal of Sustainable Agricultural Research*, Vol. 8, No.1, pp 17-42.
8. Kaur, J. (2020) Poverty and Inequality in India: Consumption Expenditure Approach, in Sengupta PP (ed.) *Contemporary issues on Globalization and Sustainable Development*. Serial Publishers, pp. 217-236.
9. Kumar, R. & Rathor, VS. (2020) Nature and types of damage by insect pests, *Journal of the Entomological Research Society*, Vol.44, No.4, pp.639-646.
10. Kumar, S., Kour, B., Yao, S.-W., Inc, M. & Osman, M.S. (2021) Invariance Analysis, Exact Solution and Conservation Laws of (2+1) Dim Fractional Kadomtsev-Petviashvili (KP) System, *Symmetry*, Vol.13, pp. 477.
11. Mohan, S., Kannusamy, AP. & Sidhu, SK. (2021) Solution of intuitionistic fuzzy linear programming problem by dual simplex algorithm and sensitivity analysis. *Computational Intelligence*, pp.1-21.
12. Munjal, A. & Kaur, J. (2021) Reliability and redundancy in performance of equipment in Kumar A., Ram, M. (eds.) *Systems Reliability Engineering*, De Gruyter.
13. Rawal, YK., Dhillon, O. & Sidhu, IS. (2020) Distinction of two featherback species (Osteoglossiformes: Notopteridae) in India based on scale structure, *Records of the Zoological Survey of India*, Vol.120, No. 3, pp.241-246.
14. Sharma, A., Singh, B., Sandhu, BS. (2021) A Compton scattering technique for wood characteristics using FLUKA Monte Carlo code, *Radiation Physics and Chemistry*, Vol. 182, pp.1-11.
15. Singh, A., Bakolia, M. (2021) CRISPR/Cas for Crop Improvement: A Brief Review. *Resonance – The Journal of Science Education*, Vol.26, No.2, pp.227-240.
16. Singh, Barjinder, Saini, A. (2020), Revisiting Partition of Punjab: Retrieving Women's Experience through Khamosh Pani, *Journal of Sikh and Punjab Studies*, Vol. 27, No. 2.
17. Sonker, S., & Munjal, A. (2021) Study of Absolute Cesàro Summable Factor with Quasi-f-Power increasing sequence of an infinite series, book chapter in *Springer Proceedings in Mathematics & Statistics*.
18. Vats, A. & Kumar, A. (2021) Disempowerment to Emancipation: The 'Black Feminist Standpoint' Antidote of Female Bonding in Gloria Naylor's *The Women of Brewster Place*. *Psychology and Education*, Vol.58, No.3, pp.2043-2053.
19. Vats, A. (2021) Chunks of the Self, Chops of Society: An Alazonic-Eironic Revisioning of the Afro-American Female in Gloria Naylor's *Mama Day*, *Pal Arch Journal of Archaeology of Egypt/Egyptology*, Vol. 18, No. 3.

20. Yadav, A.K. (2021) Comparative study on maternal health care services utilization in selected Empowered Action Group states of India, *Health and Social Care in the Community*, Vol. 29, No.2, pp. 1-12
21. Yadav, A.K. et. al. (2021) Incidence of Communicable and Non-communicable Diseases in India: Trends, Distributional Pattern and Determinants. *The Indian Economic Journal*. (published online, March 25, 2021), pp 1-17.
22. Kaur, U. & Shalu. (2021). Blockchain- and Deep Learning-Empowered Resource Optimization in Future Cellular Networks, Edge Computing, and IoT: Open Challenges and Current Solutions. In Tanwar, S. (Ed.) *Blockchain for 5G-Enabled IoT*, (Springer), pp. 1-36.
23. Vats, A. (2021). Experiential Narratives: Contextualizing Black Feminist Standpoint in Gloria Naylor's "Bailey's Cafe". *Literary Voice*, No. 13, Vol. 1.
24. Vats, A. & Kumar, A. (2021). Disempowerment to Emancipation: The 'Black Feminist Standpoint' Antidote of Female Bonding in Gloria Naylor's "The Women of Brewster Place". *Literary Voice*, No. 13, Vol. 1.
25. Singh, A., Kumar, Y. & Arora, B. (2021). Storage Proteins Profile in Diploid and Tetraploid seeds of *Oryzasativa*L.. *Cutting-edge Research in Agricultural Sciences*, Vol. 8; Science Domain International Book Division, 3-5-21, pp. 41-52.
26. Kumar S., B. Kour, et. al. (2021) Invariance Analysis, Exact Solution and Conservation Laws of $(2 + 1)$ Dim Fractional Kadomtsev-Petviashvili (KP) System, *Symmetry*, 13(3), 477.
27. Sharma, D. & Sangha, G. K.(2021). Triazophos induced neuro-splenic toxicity and evaluation of antioxidative potential of aqueous Broccoli extract in Wistar albino rats. *Journal of Applied and Natural Science*, 13(2), 616 - 626.
28. Dhillon, O., Bhatnagar, A. (2021) An Economic and Eco-friendly Approach Towards Developing a Sustainable Growth Promoting Aquafeed for *Labeocalbasu* (Hamilton 1822). *ProcZoolSoc* 74, 155–162.
29. Chahal, S.S., Pandey, R.K. (2021) On a sumset problem of dilates. *Indian J Pure Appl Math*.
30. B. M. Alotaibi, M. I. Sayyed, Ashok Kumar, Mohammed Alotiby, Amandeep Sharma, Haifa A, Al-Yousef, Norah A.M. Alsaif, Y.Al-Hadeeth, (2021) Optical and gamma-ray shielding effectiveness of a newly fabricated $P2O5-CaO-Na2O-K2O-PbO$ glass system, *Progress in Nuclear Energy*, 138, 103798, 1-10.
31. Bansal M., Bansal S., Kumar R. (2021) Simulation of two-body decay of a particle and radioactive equilibrium states, *Physics Education*, 56, 055007.
32. Kumar R., Bansal M., Bansal S. (2021) Jet Substructure as a Tool to Study Double Parton Scatterings in $V + \text{Jets}$ Processes at the LHC. In: Behera P.K., Bhatnagar V., Shukla P., Sinha R. (eds) XXIII DAE High Energy Physics Symposium. Springer Proceedings in Physics, vol 261. Springer, Singapore.
33. Kaur, Harmanjit, Garg, Neera (2021) Zinc toxicity in plants: a review, *Planta*, Vol. 25, Article No-129, Page No-1-28
34. Kaur Jaswinder (2021) Gurbani Koshan De Andraja Vich Ucharan Di Sthiti: Parmukh Koshan De Samukh Sandarbh Vich Sheeraza, Vol. 221, No. 5, pp. 70-77.
35. Kaur, Manpreet and Singh, Birbikram and Patra, Suresh (2021), Role of microscopic temperature-dependent binding energies in the decay of $^{32}\text{Si}^*$ formed in the $^{20}\text{O} + ^{12}\text{C}$ reaction, *Physical Review C*, Vol. 103, pp. 54608-1 to 54608-9.
36. Janpreet Singh, Harpreet Kaur, Gurinder Singh, Surya Kant Tripathi (2021) High thermoelectric performance in cubic inorganic halide perovskite material AgCdX_3 ($X = \text{F}$ and Cl) from first principles *Materials Today Energy*, Vol. 21.
37. Kaur, Harmanjit and Javed, Sofi and Al-Huqail, Asma and Al-Huqail, Arwa and Khan, M. (2021), Hydrogen sulfide and salicylic acid regulates antioxidant pathway to inhibit nutrients imbalance in mustard plants under cadmium stress, *Plant Biology*, 07.
38. Singla, R., Singh, G., Kanwar, V. et al. (2021) Efficient adaptive step-size formulation of an optimized two-step hybrid block method for directly solving general second-order initial-value problems. *Comp. Appl. Math*. 40, 220.
39. Singh, Balraj and Mukherjee, Gopal and Basu, S.K. and Bhattacharya, Srijit and Bhattacharya, Sudeb and Chakraborti, A. and De, A.K. and Ramadurai, Gowrishankar and Jain, A. and Kumar, Sushil and Singh, Sukhjeet (2021), Nuclear Data Sheets for $A=219$, *Nuclear Data Sheets*, Vol. 175, pp. 150-168.

40. Dr. Farhan Ahmad, 2021, Alam, S., Khalid, S., Ahmad, F., & Keezhatta, M. S. (2021). Mocking and Making: Subjugation and Suppression of Marginalized and the Politics of Identity. *Journal of Education Culture and Society*, 12(1), 375–389. <https://doi.org/10.15503/jecs2021.1.375.389>, Journal Article, 2.01 (Cite Factor)
41. Dr. Farhan Ahmad, 2021, Recuperating Submerged Histories and Voices in Theatre: Dario Fo in Dialectical Opposition, *Linguistica Antverpiensia*. Issue 2, 1784- 1794, Journal Article.
42. Mrs. Pahuljot Kaur, Assistant Professor, published one research paper on "Customer Relationship Management - Building Long Lasting Relations with Customers in Studies in India Place Names in July, 2020.
43. Dr. Harmandeep Singh, Assistant Professor one research paper "Factors influencing Web Accessibility of Corporate Information: Indian Evidence" published in *International Journal of E-Business Research* in July, 2020.
44. Dr. Parminder Singh, Assistant Professor published one chapter on "Impact of Covid 19 On Economic Growth of India & Steps Taken by Government of India to Tackle the Situation in 2020.
45. Dr. Parminder Singh, Assistant Professor participated in Faculty Development Program on "Moodle Learning Management System.

Conference Papers

1. Ghosh, S. (2021) Role of Information Technology in Public Health. Plenary Talk. Virtual International Conference on Public Health. Mel & Enid Zuckerman College of Public Health, University of Arizona, & Navrachana University, Gujarat. 24-26 March, 2021.
2. Goyal, N., Kaur, G., & Kaur, H. (2021) Salicylic Acid-Seed Priming: Impact On Nodulation, Nitrogen Fixation, Ros And Enzymatic Antioxidant Defense In Salt Stressed Chickpea Varieties. *International Plant Physiology Virtual Symposium 2021 (IPPV-2021)* on "Physiological Interventions for Climate Smart Agriculture", ICAR-Sugarcane Breeding Institute (SBI), Coimbatore, TN, Indian Society for Plant Physiology (ISPP), New Delhi, NAAS - Coimbatore Chapter & Society for Sugarcane Research and Development (SSRD) In Association with SAU's South Zone, 11-12th March, 2021.
3. Kaur, R. (2021) Relationship of EI with mental health of employees. 56th National & 25th International Conference of Indian Academy of Applied Psychology (IAAP), Department of Psychology, Punjabi University, Patiala, 18-20 February, 2021.
4. Khan, I. (2021) Positive Education: Post-Pandemic Approach. 56th National & 25th International Conference of Indian Academy of Applied Psychology (IAAP), Department of Psychology, Punjabi University, Patiala, 18-20 February, 2021.
5. Sharma, D. (2021) Managerial Salutogenic Functioning and Leadership styles: Contribution in Enhancing Human Potential. 56th National & 25th International Conference of Indian Academy of Applied Psychology (IAAP), Department of Psychology, Punjabi University, Patiala, 18-20 February, 2021.
6. Sharma, V. (2021) Practicing in Organizations: Challenges & opportunities for Psychologists. Plenary Talk. 56th National & 25th International Conference of Indian Academy of Applied Psychology (IAAP), Department of Psychology, Punjabi University, Patiala, 18-20 February.

Books Published

1. Dr. Bhawna Basar (2020) *Voluntary Action for Women's Empowerment in India*, The Women Press, New Delhi

NEWS & EVENTS

NEW INITIATIVE

4-year B.Tech. (CSE) Data Science programme in Computer Science & Engineering

The department has been established to produce globally competent graduates having creative skills and ethical values to keep pace with ever-changing technological advancements in Computer Science and Engineering. The Department of Computer Science and Engineering offers two UG courses – B.Tech in Computer Science & Engineering (CSE) with specialization in Data Science and Bachelor of Computer Applications (BCA) Honours with specialization in Data Analytics. The Department provides exposure to emerging technologies as well as futuristic technologies like High Performance Computing, Machine Learning (AI), Data Analytics, Information and Cyber Security and Software Development. To provide full hands-on exposure to most recent and advanced software, the department laboratories are fully equipped with high speed computing facilities.

WEBINARS

Due to Covid-19, all the classes were conducted in online mode during the academic session 2020-21, which continued till February 2021, so no event could be held except some webinars as given below:

S.No.	Topic of Webinar	Date	Resource Person	No of Participants
1	Awareness About Blood Cancer on World Rose Day	22.9.2020	Dr. Gaurav Prakash, Additional Professor at PGIMER, Chandigarh	1277
2	Mental Health Promotion	10.10.2020	Prof.Navratan Sharma, Maharishi Dayanand University, Rohtak	1277
3	Want To Enhance Your Communication Skills?	20.10.2020	Prof.Somendra Pant, Professor Emeritus, Clarkson University, New York (USA)	1277
4	Poetry of Louise Gluck, The Nobel Laureate 2020	22.10.2020	Prof.NishantHaider, JamiaMilliaIslamia University, New Delhi	344
5	How to crack UPSC-ICS Examination	25.10.2020	Mrs. NamitaSharan, Deputy Supdt. of Police, Gorakhpur (UP)	110
6	Radioactivity And Nuclear Decay	27.10.2020	Dr.Sarabjit Singh, Former Scientist (H), Bhabha Atomic Research Centre, Mumbai	156
7	Covid 19 & Indian Economy	29.10.2020	Prof. K. JothiShivagnanam, Chairperson, School of Economics, University of Madras, Chennai	249
8	Food as Medicine in Covid Scenario	04.11.2020	Dr. Anita Bhatnagar, Chairperson, Department of Zoology, Kurukshetra University	187
9	Applications of Biochemistry : A Pursuit of Nature to Lab	11.11.2020	Dr.Vimal Kumar, BRA National Institute of Technology (NIT), Jalandhar	90

10	Anxiety Disorders and An Overview of Medicinal Plants With Anti-Anxiety Potential	12.11.2020	Prof.Nirmal Singh, Head, Department of Pharmaceutical Science & Drug Research, Punjabi University, Patiala	187
11	Want to know Career Prospects in Commerce and Economics	17.11.2020	CS Shaifali Bhatia, Company Secretary and GST Practitioner	249
12	CO ₂ Utilization and Conversion to Alternate Fuels	18.11.2020	Dr.Nandini Devi, CSIR National Chemical Laboratory, Pune	90
13	New Education Policy and Punjabi Language	20.11.2020	Prof.Joga Singh, Former Director, Centre for Diaspora Studies, Punjabi University, Patiala	266
14	Applications of Robotic Process Automation in Commerce and Business	21.11.2020	Dr. R.K. Tailor, Assoc. Prof Manipal University, Jaipur	249
15	Approximate Solutions To Real-Life Problems	21.11.2020	Dr.Kapil Kumar Sharma, Professor, South Asian University, New Delhi	162
16	Nanotechnology in Healthcare	25.11.2020	Dr.AnimeshSamanta, Asstt. Prof.&Ramanujan Fellow, Shiv Nadar University, Greater Noida	90
17	Modern Algebra in Real Life	02.12.2020	Dr.DhananjoyDey, Assoc. Prof., IIT Lucknow, (Former Scientist of DRDO)	231
18	Applications of Machine Learning in Data Science	04.12.2020	i. Dr. Harish Kumar, Prof. IIM Kashipur& ii. Prof.Dr. K. Martin Sagayam, Karunya Institute of Technology and Sciences, Coimbatore.	21
19	Water Resources Management	10.12.2020	Prof K. Sivasubramaniyan , Professor of Economics, Madras Institute of Development Studies, Chennai-20	249
20	Solutions of Some Olympiad Problems	10.12.2020	Prof. RC Mittal, Former Professor and Head Deptt of Mathematics at IIT, Roorkee	297
21	Insights into The Preparation of Civil Services	12.12.2020	Ms Shivjeet Bharti, HCS (Haryana Civil Services) Officer, Haryana	110
22	Solving Biomedical Problems using Machine Intelligence	22.12.2020	Prof.Shandar Ahmed, (Former Dean). School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi, India	88
23	Opportunities In Data Science	24.12.2020	Prof.Somendra Pant, Professor Emeritus, Clarkson University, New York (USA)	100

24	How to deal with stress and studies in Pandemic	21.12.2020	Dr.Ravneet Kaur Assistant Professor Department of Psychology Akai University	167
25	Resolving academic and career stress	29.12.2020	Ms. Triveni Sharma Assistant Professor Department of Psychology Akai University	182
26	Managing academic and career stress	02.01.2021	Ms. Triveni Sharma Assistant Professor Department of Psychology Akai University	5
27	Managing academic and career stress	28.01.2021	Ms. Triveni Sharma Assistant Professor Department of Psychology Akai University	13
28	Management in 2021: Changing Trends in Post COVID Era	11.02.2021	Prof.Somendra Pant, Professor Emeritus, Clarkson University, New York (USA)	16
29	Career opportunities in Business Analytics	27.02.2021	Prof.Somendra Pant, Professor Emeritus, Clarkson University, New York (USA)	41
30	Career opportunities in Business Analytics	06.03.2021	Prof.Somendra Pant, Professor Emeritus, Clarkson University, New York (USA)	98
31	Role of STI in the pursuit of GOD	12.03.2021	Dr. Ashok Kumar, Associate Professor, Department of Physics, Delhi University, New Delhi	92
32	India's Freedom Struggle	12.03.2021	Himanshu Shekhar Mishra, Senior Editor, NDTV Hindi, India	207
33	An Online Journey of Teaching-Learning Process During Covid-19: Challenges & Coping Strategies	26.03.2021	Prof. Nasrin, Chairperson, Department of Education, Aligarh Muslim University	469
34	Career Opportunities in Business Analytics	16.03.2021	Mr. Iqbal Singh Managing Director, Innovative Financial Management Private Limited, Chandigarh	140
35	Webinar on Impact of ecotourism on Biodiversity.	23.07.2021	Prof. Munruchi Kaur, UGC - HRDC coordinator, Punjabi University, Patiala	131

Faculty Development Programme (FDP). Akal University conducted the following FDPs in the online-offline blended modes:

Sr. No	Name of FDP	Resource Persons	Date
1.	How to Frame MCQ Questions	Dr. P.K. Joshi Dr.Sanathanu Ghosh Dr.Birender Kaur	03.12.2020
2.	Advance Excel with Data Visualisation	IIT Kanpur Faculty	11.1.2021 to 16.1.2021
3.	Time Management	Dr.Gurparkash Singh, Manager EHR, Johnson & Johnson, New Jersey, USA	20.03.2021
4.	Workshop on BIG DATA	Mr. Abhishek Solanki Senior Data Engineer Cisco	26.03.2021

National Conference conducted: The University conducted the following online one day National Conference:

Topic	Dated	Resource Person	No of Participants
One Day National Conference on "Recent Trends in Green Chemistry	27.03.2021	1. Prof.Asit Kumar Chakraborti, FRSC, FNA Department of Chemistry IIT - Ropar. 2. Prof.Brindaban Chandra Ranu, FASC, FNA Department of Organic Chemistry IACS, Jadavpur, Kolkata 3. Dr.Navjeet Kaur Department of Chemistry, BanasthaliVidyapith Jaipur 4. Prof. V. Jayathirtha Rao, CChem, FRSC, FAPAS, FTAS Fluoro Agro Chemicals Department, CSIR- Indian Institute of Chemical Technology, Tarnaka, Hyderabad	165
Interactive Video Conference on Intellectual Property Rights: What Researchers Need to Know (Collaborative activity with PHD Chamber of Commerce and Industry)	30.07.2021	1. Mr. R K Parmar, Deputy Director, MSME DI, Ludhiana, Ministry of MSME, Gol 2. Dr. J K Sharma, Co-Chairman, Punjab Education Committee and Director - Research, Industry Interface & Innovation, CT University, Ludhiana 3. Dr. Shweta Sen Thalwal, Founder, Integrum IP, Mohali 4. Mr. Vineet Sharma, Vice President - Operations, TT Consultants, Chandigarh	151

Three Day International Conference in the Department of Chemistry in collaboration with the Indian Chemical Society, Kolkata.

S.No.	Topic	Date	Resource Person	No of Participants
1	Recent Trends in Green Chemistry (ICRTGC-2021)	28 th – 30 th September 2021	16 renowned speakers from the various worldwide reputed institutes. Among them 8 international speakers were from abroad.	989

One Day National Conference in Department of Chemistry

S.No.	Topic	Date	Resource Person	No of Participants
	One Day National Conference on "Recent Trends in Green Chemistry	27.03.2021	1. Prof.Asit Kumar Chakraborti, FRSC, FNA Department of Chemistry IIT - Ropar. 2. Prof.Brindaban Chandra Ranu, FASC, FNA Department of Organic Chemistry IACS, Jadavpur, Kolkata 3. Dr.Navjeet Kaur Department of Chemistry, BanasthaliVidyapith Jaipur 4. Prof. V. Jayathirtha Rao, CChem, FRSC, FAPAS, FTAS Fluoro Agro Chemicals Department, CSIR- Indian Institute of Chemical Technology, Tarnaka, Hyderabad	165

STUDENTS' ACHIEVEMENTS

Following students qualified CSIR-NET/JRF/GATE/JAM

Student Name	Department	Remarks
1. Ms. Nandini Goyal	Botany	CSIR-NET(JRF) (AIR-8)
2. Ms. Lovepreet Kaur Sidhu	Botany	CSIR-NET (AIR-108)
3. Ms. Bhawna	Botany	CSIR-NET (AIR-128)
4. Ms. Muskan	Botany	GATE-2021
5. Ms. Rajwinder Kaur	Chemistry	GATE-2021
6. Ms. Neha Bansal	Chemistry	IIT-JAM
7. Ms. Jaspreet Kaur	Mathematics	GATE-2021
8. Ms. Lovepreet	Mathematics	IIT-JAM (AIR-400)
9. Mr. Viney Kumar	Zoology	CSIR-NET (AIR-80)

National Graduate Physics Examination-2021

Following 04 students of Physics Department qualified National Graduate Physics Examination-2021 conducted by Indian Association of Physics Teachers:

Department	Department	Remarks
1. Ms.Shinam	Physics	NGPE-2021
2. Ms.Jaspreet Kaur	Physics	NGPE-2021 (Top 10% at the Centre)
3. Ms. Amandeep Kaur	Physics	NGPE-2021
4. Ms. Jyoti Rani	Physics	NGPE-2021 (Top 10% at the Centre)

Others

1. Mr. Jaswinder Singh, Research Scholar, Punjabi Department selected for Mullana Azad National Fellowship.
2. Ms. Kanchan Rani, B.A (H) Economics qualified CAT-2020 and selected for admission in MBA (2021-23 Batch) at IIM Kashipur.
3. Mr. Harinder Singh, B.Sc. (H) Maths selected for Level-O Mathematics Training and Talent Search Programme-2021
4. Mr. Divye Gupta, B.Sc. (H) Maths selected for Level-1 Mathematics Training and Talent Search Programme-2021
5. Mr. Sandeep Dass, B.Sc. (H) Maths selected for Level-1 Mathematics Training and Talent Search Programme-2021

STUDENTS' PROGRESS

COURSE WISE PASS PERCENTAGE OF ODD SEMESTER EXAMINATIONS

Sr. No.	Programme		Sem	Total Students appeared	No. of Students with Reappear/s	No. of Students Passed	Pass %age
1	Botany	UG	3rd	14	2	12	85.71
		UG	5th	8	0	8	100.00
		PG	3rd	12	1	11	91.67
2	Chemistry	UG	3rd	20	5	15	75.00
		UG	5th	19	1	18	94.74
		PG	3rd	9	0	9	100.00
3	Mathematics	UG	3rd	69	20	49	71.01
		UG	5th	68	20	48	70.59
		PG	3rd	16	5	11	68.75
4	Physics	UG	3rd	15	6	9	60.00
		UG	5th	15	4	11	73.33
		PG	3rd	13	0	13	100.00
5	Zoology	UG	3rd	10	2	8	80.00
		UG	5th	14	0	14	100.00
		PG	3rd	5	0	5	100.00
6	Economics	UG	3rd	22	7	15	68.18
		UG	5th	15	2	13	86.67
		PG	3rd	3	0	3	100.00
7	English	UG	3rd	34	10	24	70.59
		UG	5th	31	2	29	93.55
		PG	3rd	14	2	12	85.71
8	Psychology	UG	3rd	19	3	16	84.21
		UG	5th	25	2	23	92.00
		PG	3rd	2	1	1	50.00
9	Punjabi	UG	3rd	30	6	24	80.00
		UG	5th	27	2	25	92.59
		PG	3rd	18	3	15	83.33
10	Commerce	UG	3rd	57	13	44	77.19
		UG	5th	44	3	41	93.18
		PG	3rd	5	0	5	100.00
	Overall Result			653	122	531	81.32

COURSE WISE PASS PERCENTAGE OF ODD SEMESTER EXAMINATIONS

Sr. No.	Programme		Sem	Total Students appeared	No. of Students with Reappear/s	No. of Students Passed	Pass %age
1	Botany	UG	1st	6	3	3	50.00
		PG	1st	7	0	7	100.00
2	Chemistry	UG	1st	15	3	12	80.00
		PG	1st	11	1	10	90.91
3	Mathematics	UG	1st	34	2	32	94.12
		PG	1st	13	6	7	53.85
4	Physics	UG	1st	11	5	6	54.55
		PG	1st	10	3	7	70.00
5	Zoology	UG	1st	4	1	3	75.00
		PG	1st	12	1	11	91.67
6	Psychology	UG	1st	11	1	10	90.91
		PG	1st	7	0	7	100.00
7	Economics	UG	1st	18	7	11	61.11
		PG	1st	7	1	6	85.71
8	English	UG	1st	39	11	28	71.79
9	Punjabi	UG	1st	24	6	18	75.00
10	Commerce	UG	1st	48	7	41	85.42
11	Education	UG	3rd	33	10	23	69.70
Overall Result				310	68	242	78.06

COURSE WISE PASS PERCENTAGE OF EVEN SEMESTER EXAMINATIONS

Sr. No.	Programme		Sem	Total Students appeared	No. of Students with Reappear/s	No. of Students Passed	Pass %age
1	Zoology	UG	6th	14	0	14	100.00
2	Physics	UG	6th	15	3	12	80.00
3	Mathematics	UG	6th	67	14	53	79.10
4	Chemistry	UG	6th	19	0	19	100.00
5	Botany	UG	6th	8	1	7	87.50
6	Punjabi	UG	6th	25	5	20	80.00
7	Economics	UG	6th	15	3	12	80.00
8	Commerce	UG	6th	44	4	40	90.91
9	Psychology	UG	6th	25	0	25	100.00
10	English	UG	6th	27	1	26	96.30
	Overall Result			163	14	149	91.41

COURSE WISE PASS PERCENTAGE OF EVEN SEMESTER EXAMINATIONS

Sr. No.	Programme		Sem	Total Students appeared	No. of Students with Reappear/s	No. of Students Passed	Pass %age
1	Botany	UG	4th	14	0	11	78.57
2	Botany	PG	4th	12	0	12	100.00
3	Chemistry	UG	4th	21	0	21	100.00
4	Mathematics	UG	4th	71	15	56	78.87
5	Physics	UG	4th	16	3	13	81.25
6	Zoology	UG	4th	11	0	11	100.00
7	Economics	UG	4th	23	3	20	86.96
8	Economics	PG	4th	3	0	3	100.00
9	English	UG	4th	34	13	21	61.76
10	Psychology	UG	4th	19	6	13	68.42
11	Psychology	PG	4th	2	2	0	0.00
12	Punjabi	UG	4th	29	4	25	86.21
13	Commerce	UG	4th	57	22	35	61.40
14	Commerce	PG	4th	4	0	4	100.00
15	Education	UG	4th	32	7	25	78.13
	Overall Result			348	78	270	77.59

DEGREES AWARDED

Department	Type	No. of students	Batch
Mathematics	UG	56	2017-20
	UG	4	2016-19
	UG	3	2016-19
	PG	14	2018-20
	PG	1	2018-20
Physics	UG	28	2017-20
	UG	2	2016-19
	PG	7	2018-20
	PG	1	2018-20
Chemistry	UG	35	2017-20
	PG	12	2018-20
	PG	1	2017-19
	PG	1	2018-20
Botany	UG	13	2017-20
	PG	11	2018-20
Zoology	UG	18	2017-20
	UG	1	2017-20
	PG	18	2018-20
SGGSS	UG	17	2017-20
Economics	UG	27	2017-20
	UG	1	2016-19
	PG	3	2018-20
Psychology	UG	17	2017-20
	PG	2	2018-20
English	UG	31	2017-20
	PG	10	2018-20
Punjabi	UG	2	2016-19
	UG	21	2017-20
	UG	1	2017-20
	PG	4	2018-20
	PG	1	2018-20
Commerce	UG	45	2017-20
	PG	6	2018-20

MEMORANDUM OF UNDERSTANDING

A memorandum of understanding (MOU) is a written agreement between institutions that expresses their aligned will. This type of document also details the intent of a common line of action. It's a way for all institutions to express that they agree to proceed with their mutual goals. An MOU indicates that the institutions have reached an understanding and are ready to move forward to:

- a. use their collective expertise and resources to promote academic exchange and cooperation in teaching and research in business for the mutual advancement of learning
- b. define responsibilities, liabilities and commitments of the institutions involved
- c. to ensure proper system implementation, to meet the objectives pertaining to submission and access to Electronic Theses and Dissertations
- d. to foster and develop academic and research collaboration between the two institutions
- e. to facilitate advancement of knowledge on the basis of reciprocity, best effort, mutual benefit and frequent interaction

Keeping in view of the above, three MoUs were signed during the Academic Session 2020-2021 with:

- a. **Synergy University, Moscow, Russia on March 9th, 2021.**
- b. **Inflibnet Centre, an IUC of University Grants Commission located at Gandhinagar on April 23rd, 2021.**
- c. **Sri Guru Granth Sahib World University, Fatehgarh Sahib on May 28th, 2021.**

INTERNAL QUALITY ASSURANCE CELL (IQAC)

As per National Assessment and Accreditation Council (NAAC) guidelines every accredited institution should establish an Internal Quality Assurance Cell (IQAC) as a post-accreditation quality sustenance measure. Since quality enhancement is a continuous process, the IQAC becomes a part of the institution's system and works towards realization of the goals of quality enhancement and sustenance. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the overall performance of institutions. Akal University, Talwandi Sabo has established its IQAC with the objective to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution. IQAC at the University works for overall quality enhancement in various areas including curriculum development, teaching-learning and evaluation process, infrastructure resources, students's support systems and governance structure.

Following are the members of IQAC:

Sr. No.	Name	Position
1.	Dr. Gurmail Singh, Vice-Chancellor	Chairperson
2.	Dr. Davinder Singh, Secretary, The Kalgidhar Society	Member
3.	Dr. M.S. Johal, Dean Academic Affairs	Member
4.	Dr. B.S. Brar, Associate Professor, Regional Centre, Punjabi University	Member
5.	Dr. (Mrs.) K.K. Johal, Associate Professor, Botany	Member
6.	Dr. (Mrs.) NPK Bhatia, COE	Member
7.	Dr. Sukhjeet Singh, Associate Professor, Physics	Director
8.	Dr. Shantanu Ghosh, Associate Professor, English	Member
9.	Dr. Ibadat Khan, Assistant Professor, Psychology	Member
10.	Dr. Vikram Sagar, Assistant Professor, Physics	Member
11.	Er. Manjit Singh, Industrialist	Member
12.	Ms. Harpreet Kaur, Student Representative	Member
13.	Ms. Arshdeep Kaur, Alumni Representative	Member
14.	Mr. Mohinder Singh, Local Representative	Member
15.	Dr. Sawarn Singh	Member

IQAC Activities during 2020-2021

To promote quality in teaching and other allied activities, IQAC Cell of the University organized various activities which include Faculty Development Programs on How to Set MCQs and Advanced Excel with Data Visualization, webinar series on Time Management and Skill Development Sessions for UG & PG final year students.

IQAC Cell organised 4 Faculty Development Programmes (FDPs). The faculty benefitted from the resource persons from national/international reputed institutions including Tata Institute of Fundamental Research (TIFR), IIT-Kanpur, Johnson & Johnson USA & CISCO.

One Week National Faculty Development Programme On Advance Excel with Data Visualization

One week Faculty Development Programme (FDP) was organized by Akal University, Talwandi Sabo in association with Electronics & ICT Academy, Indian Institute of Technology, Kanpur (An initiative of Ministry of Electronics & Information Technology (MeitY), Ministry of Communications & IT, Govt. of India on Module: "Advance Excel with Data Visualization") from 11th January – 17th January 2021. The FDP was organized under the flagship and guidance of Prof. Gurmail Singh, Vice Chancellor, Akal University and Dr Sukhjeet Singh Dhindsa, Director IQAC, Akal University. The FDP was conducted by Mr. Rahul Gupta of IIT Kanpur and successfully coordinated by Mr. Amanjeet Singh Bhandari, Assistant Professor, Department of Commerce, Akal University. More than 400 participants were registered from different states of the country and attended this FDP. The overall event concluded on a very positive note with great learning grasped by every participant.

Following Topics Were Covered In One Week Faculty Development Programme:

- More Functions and Formulas
- Working with Data Range
- Working with Live Data
- Working with Dashboards
- Working with Tableau

The FDP helped the Faculties/researchers in developing an approach towards the importance of identifying and knowing correct tools and techniques for suitable use of excel. Working with Live Data / Dashboard/ Tableau was new to many participants, but trainers command on subject made it easy for all.

All the above sessions were very informative. The discussed areas were of great benefits for the participants. Participants were enlightened and benefitted with the wisdom of the speaker Mr. Rahul Gupta. The FDP received a warm feedback from all the participants.

Faculty Of Sri Guru Granth Sahib Studies

DEPARTMENT OF SRI GURU GRANTH SAHIB STUDIES

The Department of Sri Guru Granth Sahib Studies has been established in 2015 to honour and fulfill the fourth prophecy of Revered Guru Gobind Singh Ji that Talwandi Sabo (also known as Damadma Sahib) shall emerge as Guru Ki Kashi i.e., eminent centre of teaching and learning of 'SIKHISM'. The department envisions:

1. To translate the holy scripture of Sri Guru Granth Sahib and other related Sikh scriptures to major languages of the world so as to spread the message of Sikh philosophy to every part of the world and people irrespective of caste, colour and religion.
2. To impart regular rigorous training on Sri Guru Granth Sahib to the students who enrolled themselves for the course B.A. (Hons.) in SGGS, to believe and practice according to the tenants of 'SIKHISM'.
3. To provide a congenial platform for the eminent Sikh scholars and students to undertake the extensive and indepth study on various aspects of Sikhism to disseminate the tenants of Sikhism in the true manner popularising Sikhism worldwide.

The Department offers three years B.A. (Hons.) course in the subject of Sri Guru Granth Sahib Studies, which is fully residential and totally free of cost. As a part of their training, *NITNEM* is imparted every morning and evening, important religious functions are organized. Complete Santhiya of Sri Guru Granth Sahib with interpretation is being conducted in three years. Special training in Gurbani Katha and Gurmat Lectures are a practical part of the course. Gurbani Kirtan Training is also part of the curriculum. Students participate in Gurmat Samagam by performing Kirtan. One of the major objectives of the department is to inculcate Gurmat Jeevan in students.

Faculty

Sr. No.	Name	Designation	Qualification
1.	Dr. Tarsem Singh	Assistant Professor	M.A., UGC NET, Ph.D, Diploma in Sikh Studies, Diploma in Gurmat Studies.
2.	Dr. Simarjeet Kaur	Students Counselor	M.A., (Gold Medalist), Ph. D

Activities during 2020-21

Gurmat Camp at Cheema Sahib

The Gurmat Camp in Cheema Sahib was held on 14 November 2020 to 18th March 2021. During this time different activities were performed by students. In the daily schedule, Nitnem time was 12:00 AM to 07:30 AM. During this time students performed various services by rotation in Diwan Hall. Those activities are given below: Parkash of Sri Guru Granth Sahib, Naam Simran, Nitnem, Sukhmani Sahib, Asa Ki war, Nitnem and Katha Vichar. After breakfast Students took part in Santhiya, Tabla and Kirtan Class followed by Jeevni and Sikh Sidhant Class. Sewa was also part of the daily routine. In the Evening Schedule Katha of Sant Bilas (Life of Sant Atar Singh Ji Maharaj) and Gur Partap Suraj Granth were performed by students. Duties on Akhand Path, Sukhmani Sahib Path, Parbhat Pheri and Kirtan at Gurmat Samagams were performed by students at different places. Gurmat quiz competition was conducted every week. At the Gurmat Camp, the students learned the practical Aspect of the course.

Gurbani Sunao Sanmaan Pao on Baisakhi at Takhat Sri Damdama Sahib

The festival of Baisakhi is celebrated every year at Takht Sri Damdama Sahib and is marked by thousands of people. On this occasion Akal University conducts *Gurbani Sano Sanman Pao* competition where students of different age groups answer questions related to Gurbani and Sikh history. These students are honored with various prizes. This year the competition was held on 13th and 14th April 2021 at Takht Sahib.

International webinar "Guru Tegh Bahadur Ji: Life and Teachings"

An international webinar was organized by Akal University, Talwandi Sabo on May 1, 2021 at 4:30 pm (IST) dedicated to the 400th birth anniversary of the ninth Patshah Guru TeghBahadur. The theme of webinar was "Sri Guru Tegh Bahadur Ji: Life and Teachings". The speaker of the webinar was Dr.Davinderpal Singh, Director, Center for Understanding Sikhism, Canada. Dr. Singh shared his views on the life history, philosophy and Bani of Guru Tegh Bahadur. This webinar was conducted through Zoom meeting in which 100 delegates from different countries India, Canada, USA, UK and UAE participated. The webinar was live streamed on Akal University's YouTube channel, with over 100 followers participating. At the beginning of the webinar, Dr.Sukhjot Singh (Director, IQAC) welcomed the audience. Later, Dr. DP Singh gave his presentation followed by a discussion. Students and teachers asked their questions which were well taken by Dr. Singh. At the end of the webinar, Prof. Gurmail Singh (Vice Chancellor) shared his views on the life philosophy of Guru Sahib and thanked everyone for joining the webinar.

Commemoration of 75th Anniversary of India's Freedom

Lecture competition (25.06.20021)

Department of Sri Guru Granth Sahib Studies, Akal University organized a lecture competition of students dedicated to 75th Independence Day. In which six students of the



department presented their lectures. At the beginning of the competition, Dr.Tarsem Singh shared his views on the importance of independence. He highlighted the role of Punjabis in the freedom struggle. The students delivered lectures on Bhai Randhir Singh, Gurdwara Reform Movement, Kamagatamaru, Shaheed Udham Singh, Ghadar Movement, Shaheed Bhagat Singh and Shaheed Kartar Singh Sarabha respectively. At the end of the program, Prof. Birbikram Singh (Head, Department of Physics) gave an inspiring lecture. Dr.

BirBikram Singh explained to the students the importance of social welfare and the spirit of sacrifice for the country. Citing examples of many martyrs from various traditions. He encouraged the students to study diligently. In the lecture competition, Manpreet Singh won first, Akbal Singh second and Jeetpal Singh third. At the end, Dr.Tarsem Singh thanked the Vice-Chancellor, Dr.Birbikram Singh and all the students.

Faculty of Life Sciences

DEPARTMENT OF BOTANY

The Department of Botany has been established in 2015 with the mission to impart quality education at undergraduate and postgraduate levels. However, this department is also actively engaged in the research as is evident by the publications of research papers by the faculty members in the journals of national and international repute. The department has highly competent faculty having specialization in various fields such as plant sciences, namely Molecular Biology, Biochemistry, Biotechnology, Plant Physiology, Systematics, Mycology, Plant Pathology and Plant Ecology.

To inculcate the interaction among the students in the various aspects of Plant Sciences, *La Societe Bontanique* organized periodic power point presentations by UG and PG students, where both students and the faculty members interacted with each other in the post session periods. Besides academic activities, the department also organized Quiz Competition, Model and Poster and Rangoli competitions, debates and declamation contest having themes directly related to the modern aspects of Plant Sciences and burning environmental issues.

The department offers three years B.Sc. (Hons.) and two years M.Sc. courses having course curriculum at par with the highly rated universities.

The department has the facilities in the form of research laboratories, library and expert guidance to pursue Ph.D. degree.

Faculty

Sr. No.	Name	Designation	Qualification
1	Dr. (Mrs.) K.K. Johal	Associate Professor	M.Sc., Distinction in M.Phil., Ph.D.
2	Dr. Harmanjit Kaur	Assistant Professor	M.Sc. (Hons. School) (PU-Gold Medal), UGC-NET, Ph.D. Young Researcher Awardee
3	Dr. Arvinder Singh	Assistant Professor	M.Sc.(KUK Gold Medal), UGC-NET, Ph.D.
4	Dr. Avneesh Kumar	Assistant Professor	M.Sc. (Hons. School), CSIR-JRF, Ph.D. DS Kothari PDF, Young Scientist Award, ICMPAR (2012), Rajasthan
5	Dr. Simranjeet Kaur	Assistant Professor	M.Sc., ICAR-NET, Ph.D. Awarded National Level Maulana Azad Fellowship
6	Dr. Harwinder Kaur	Assistant Professor	M.Sc.,(Gold Medal) DST-INSPIRE Fellowship, JRF, Ph.D.
7	Dr. Kuljinder Kaur	Assistant Professor	M.Sc., Ph.D. BSR Fellowship for Meritorious Students

Activities during 2020-21

Van Mahotsava 2020

La Societe Botanique – the Botanical Society of the Department of Botany, Akal University, Talwandi Sabo celebrated a National Van Mahotsava, 2020 from 11th August, 2020 – 12th September, 2020. Around 180 participants from different Institutions/ Colleges/ Universities across the country participated in different online events like Painting, Photography and Quiz competitions. About 115 participants took part in Quiz competition, 40 Participants in Painting & 25 participants in Photography competitions. The celebrations were started with plantation of the diverse type of trees including *Cassia*, *Damascus* (wild rose) by Prof. Gurmail Singh, Hon^{ble} VC of Akal University & other faculty members of the University on 11th & 12th August, 2020. An online quiz competition was conducted on 21st August, 2020, 90 participants out of 115 were able to pass it. All were awarded Certificate of Participation. Online Paintings were invited by 24th August, 2020 and evaluated for different positions viz. 1st, 2nd, 3rd & consolation. The entries for photography competition were invited by 5th September, 2020.



National Webinar - 2020

Department of Botany, Akal University, Talwandi Sabo, Bathinda organized a National level webinar on “Anxiety disorders and overview of the medicinal plants having anti-anxiety potentials” on 12th November, 2020. Around 150 participants including ,Teaching faculty, Research Scholars and Students, from diferent institutions across the country like St. Edmund's College, Shillong, Patel Memorial National College, Rajpura, Kurukshetra University, Eternal University, Khalsa College, Patiala, Government PG College, Panchkula, Kishan Lal Public College, Rewari, P.S.G.V.P.M. College, Shahada (Maharashtra) got registered for the event. The speaker of the session was Dr. Nirmal Singh, Professor & Head, Department of Pharmaceutical Sciences & Drug Research, Punjabi University, Patiala. Prof. Nirmal Singh explained in lucid manner that how a simple fear can change into persistent fear and ultimately to anxiety & then, depression which may affect a person's emotional, physical and financial health badly. He also explained a number of anxiety disorders viz, Generalized Anxiety Disorders (GAD), Obsessive Compulsive Disorders (OCD), Panic Disorders and Social phobias with their identification symptomps, and provided the insights into their treatment using meditation, yoga, aromatherapy, acupuncture, medications etc. Besides these, he elaborated the use of various medicinal plants like Saffron, *Passiflora*, *Withania*, *Crocus*, *Hypericum*, *Angelica*, Ginkgo etc. to overcome the effects of anxiety in a natural way. After the completion of the presentation, Prof. Singh meticulously answered the queries raised by the participants related to the topics.



Scientific Rangoli Competition



On the occasion of 'National Science Day-2021, '*La Societe Botanique*' of Department of Botany organized a “Scientific Rangoli Competition” on the theme “Biological concepts” on March 4th, 2021 from 2:00 pm to 4:00 pm. The event was organized with an aim to bring their scientific creativity on the canvas. Fifteen teams comprising of 2 students in each team participated in the competition. The students put their best foot forward and took part in the competition with zest and prepared very creative and innovative rangolies using different colors.

It was amazing to see the creativity of the students, and adjudged first, second and third positions on the basis of number of the criteria. Position holders were awarded medals and certificates. Participation certificates were distributed to all the students.

National Webinar - 2021

Department of Botany, Akal University, Talwandi Sabo, Bathinda organized a National level webinar on "Next generation genomics for generation of whole genome and trait-specific resources for crop improvement" on 9th April, 2021. Around 155 participants including Teaching faculty, Research Scholars and Students, from different institutions across the country like Bangalore University, JSPMSNDT Junior college. Aurangabad, Kurukshetra University, Eternal University, Baru Sahib, Panjab University, Chandigarh, CCSHAU Hisar, Annamalai University, Dr Babasaheb Ambedkar Marathwada University etc. got registered for the event. The speaker of the session was Dr. Mukesh Jain, FNASc, Professor, School of Computational & Integrative Sciences, JNU, New Delhi. Prof. Mukesh Jain explained explicitly about the role of next generation sequencing viz. illumina, reverse termination sequencing in decoding the genome of an organisms within week. He also explained the role of these sequencing in diversity analysis, genetic and epigenetic characterization of germplasm and pathogen detection, identification, and elimination. As per his views, knowing the genome sequence has an advantage in crop breeding. Furthermore, NGS technologies have made possible the quick correlations of phenotypes with genotypes in different crop species, thereby increasing the precision of crop improvement. After the completion of the presentation, Prof. Jain meticulously answered the queries raised by the participants related to the topics.

Slogan Writing Competition

Department of Botany organized a slogan writing competition to commemorate the 75th anniversary of India's freedom under the theme "**Azadi ka Amrit Mahotsav**" from **7th April to 10th April, 2021** to explore the writing skills of the students. All the students of the Department were instructed to send original, concise and meaningful slogans through email or WhatsApp. The competition was open to all the students of the Botany Department. Total 20 slogans were received on time from the students and out of these, three best slogans were adjudged as first, second and third by the judges. All the students were distributed e-certificate for participation.

International Day of Biological Diversity - 2021

Plantation & Distribution Drive

Plants are the integral part of today's living as they possess medicinal values, aesthetic value, improve air quality, preserve soil and reduce air pollution. Considering these values of the plants, Department of Botany, Akal University in collaboration with Punjab State Biodiversity Board celebrated International Day for Biological Diversity (IBD-2021) by distributing and planting a number of plants with medicinal and air purifying properties on 22nd May, 2021.

On this day, Dr. Sawarn Singh, Registrar, laid down the foundation of Herbal park on the University by planting Arjun tree. Other plants planted in the park by other members included Amla and Harshingar. After that, a good number of plants viz. Aloe vera, Bryophyllum, Pothos, Spider plant, Kadipatta, Lemon grass, Amla, Tulsi were distributed among the people from outside the campus as well as working in the University. These people were urged by Registrar of the University to take care of these plants and contribute their share for the welfare of our mother earth. Further, he added that we are the part of the nature and we are the solution also of this degrading biodiversity. All took the pledge to contribute the same



International Day of Biological Diversity – 2021

Department of Botany, Akal University, Talwandi Sabo (Bathinda) in collaboration with Punjab Biodiversity Board, Chandigarh celebrated "International Day for Biological Diversity - 2021" on 22nd May, 2021. On this eve, one day National Webinar on *Conservation of Phytodiversity* was organized virtually on 22-05-2021 to create an awareness among the students and general masses about biodiversity conservation. More than 200 participants including students, researchers, faculty members, general public, etc. attended the webinar through zoom meeting and live YouTube platform. The event was started by Dr. Kuljinder Kaur, Assistant professor, Department of Botany, Akal University with the welcome of the guests and participants. Dr. Kaur throw light on the importance of biodiversity day celebration and theme of this day i.e., ***We are part of the solution***. She herself is a botanist and working on the various aspects of the biodiversity in Punjab State. She said that if we have to conserve biodiversity then there is a need of sustainable development. We have to utilize various natural resources wisely or judiciously. She appealed all the participants to adopt sustainable lifestyle and be a part of the solutions to strengthen the conservation of biodiversity. After that, Dr. Simranjeet Kaur, Assistant professor of Botany Department, Akal University introduced the guest of speaker of this Webinar, Dr. Vedpriya Arya. Dr. Arya is an eminent Scientist of Patanjali Herbal Research Institute, Haridwar (Uttarakhand). She delivered her talk on the topic "*Conservation of Phytodiversity*". She explained various research initiatives and global scenario of conservation of plant diversity especially medicinal plants. She emphasized that for the conservation of biodiversity, first we have proper documentation of the floral and faunal diversity. But unfortunately, till date we do not have accurate data of number of plants/animals living on the planet earth. She also highlighted the importance of traditional medicinal system or Ayurveda in the modern time. She informed the participants about various projects initiated by Patanjali Research institute for the documentation and conservation of phytodiversity. Some important Patanjali Projects are conservation of plant diversity of Pokhari Hills in Uttarakhand, preparation of more than 10000 specimens in herbarium, plant conservation in Charekh village, 100 volumes of Encyclopedia: websites giving information about medicinal plants, Medicinal plant museum: this is the first line drawing museum in the world having handmade drawing of plants, canvas paintings which are included in Golden Book of world records, World herbal Encyclopedia software- self-made by Patanjali and recently prepared Coronil medicine against COVID19. In the question/answer session, Dr. Avneesh Kumar, Assistant Professor, Botany Department shared the queries of the participants with the speaker and Dr. Arya answered the questions and clarified the doubts raised. It was very informative and productive webinar.

PG students who gave Power Point Presentations (Session 2020-21)

1. 25-02-2021

- | | |
|---------------------------------------|-------------------------|
| Pankaj (M.Sc 4 th sem) | - Cancer |
| Pooja Devi (M.Sc 4 th sem) | - Adaptations in Plants |

2. 13-03-2021

- | | |
|--|--|
| Neha Tiwari (M.Sc 4 th Sem) | - Ecosystem and its components |
| Yogita Rani (M.Sc 4 th Sem) | - Agrobacterium mediated gene transformation |



DEPARTMENT OF ZOOLOGY

The Department of Zoology is a constituent entity of the Faculty of Science, Akal University, Talwandi Sabo. Since its inception in 2015, the Department is well equipped with teaching and research laboratories. At present, the department offers two years M.Sc. & three years B.Sc. (Hons.) degree in Zoology. The Department of Zoology also offers Ph.D. programmes in various research areas of Applied Zoology. There are separate laboratories for under-graduate and post-graduate students. A specialized laboratory for research students as per the specific needs of the various thrust areas of research, including Cell and Animal Physiology, Fish Taxonomy and Aquatic Biology, Fish Ecology, Fish Toxicology, Fish Population Dynamics, Cytogenetics, Entomology & Parasitology is also available. The Zoological Society, has been actively involved in promoting academic and co-curricular activities for students like Poster and Model Making, Quiz Competition, Rangoli Competition, Debate Competition etc.

The Department is academically supported by competent and efficient faculty members believing in high standards of teaching and research. Throughout the motto of the Department has been to promote the quality education by adopting modern methods of teaching aids. The department regularly organized seminars, workshops and invited lectures for the overall development of the students.

Faculty

Sr. No.	Name	Designation	Qualification
1	Prof. M.S. Johal	Professor of Eminence	M.Sc. (Hons. School), Ph.D., PDF (Czech.) Fellow Zoological Society London, Electron Microscope Society
2	Dr. NPK Bhatia	Associate Professor	M.Sc.(Gold Medal) , M. Phil., Ph.D.
3	Dr. Vikram Singh Rathor	Assistant Professor	M.Sc., ICAR-NET, Ph.D.
4	Dr. Dharmender Sharma	Assistant Professor	M.Sc., CSIR-NET, Ph.D.
5	Dr. Abhinav Saxena	Assistant Professor	M.Sc., Ph.D.
6	Dr. Manjeet Kaur	Assistant Professor	M.Sc., Ph.D.
7	Dr. Rajinder Kaur	Assistant Professor	M.Sc., Ph.D.
8	Dr. Oshin Dhillon	Assistant Professor	M.Sc., (Hons School), Ph.D.

Achievements

1. Faculty Achievements

Ser No.	Faculty Name	Oral presentation Title	Date	Details (Institute Name, Dates)
1.	Dr. Rajinder Kaur	Comparison of honeybee collected pollen against free radical scavenging activity induced by Salmonella typhimurium in mice.	3-15 March, 2021	4th International Conference On "Current Approaches in Agricultural, Animal Husbandry & Allied Sciences for Successful Entrepreneurship (CAAAAHASSE-2021)" held on 13-15 March, 2021. (Got 3rd prize in oral presentation).
2.	Dr. Abhinav Saxena	The Science Of Taxonomy: Obsolete Or Still Relevant?	11 May 2021	Department of Zoology Multani Mal Modi College, Patiala.

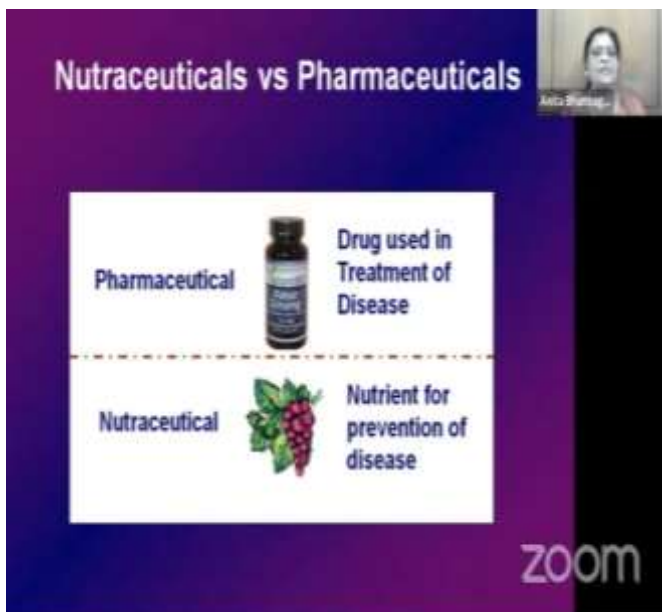
3. Details of Conferences/ Seminars/ Webinars/Workshops

Invited talk by Anita Bhatnagar, Chairperson, Department of Zoology, Kurukshetra University during One Day National Webinar on 'Food as Medicine in COVID Scenario' held on November 04, 2020.

Activities during 2020-21

Food as Medicine in Covid Scenario

The Department of Zoology organized a webinar entitled "Food as Medicine in COVID Scenario" on 4th November 2020 at 11:00 am. The event was organised with an aim to create awareness regarding the importance of food serving as medicine in COVID scenario. The COVID-19 (coronavirus) pandemic has been dynamic and intense for all of us in the past months. Dr. Anita Bhatnagar, Chairperson, Department of Zoology Kurukshetra University, Kurukshetra) was the speaker of the event. The speaker discussed the role of maintaining healthy and nutritious diet to boost our immunity and combat the disease risk. The immune system is responsible for fighting the foreign invaders and lack of proper nutrition and proper elements in food decreases the immune function and increases the chance of infection. Hence, maintaining healthy nutrition is the key to control diseases and thus eat in such a way that 'let food be your medicine'. She emphasised on the use of nutraceuticals including functional foods, probiotics, prebiotics, aquatic foods along with regular exercise, stress reduction and maintenance of healthy body weight in enhancing health and immune system to fight successfully with diseases like COVID 19. Students and faculty from the Department of Zoology, Botany and Chemistry participated the webinar with great enthusiasm. The participants raised many interesting questions and answered by the speaker very efficiently.



Earth Day

An online Poster Making, Photography and slogan writing competition was organised by the department on April 22nd, 2021 on the sub-themes of "Restore Our Earth: as under:

- Waste management
- Global warming
- Reduce-Reuse-Recycle
- Health and Nutrition
- Nature and Conservation
- Man and Environment

In total 59 registrations were received online before April 17th, 2021 after that submission link was shared with the participants. Then E-certificates were distributed to the Winners and Participants on their emails.



Quiz Competition

A quiz completion was organised by the the department on the occasion of 75th week celebrations in commemoration of 75th anniversary of India's Freedom on April 30th, 2021. The theme was "**Freedom struggle (from 1857 to 1947)**"

The great 'Sepoy Mutiny' of 1857 first sprouted the dream of Independence among the common masses of India. From here onwards many historical and unforgettable incidents took place which are still remembered by every Indian (Barrackpore, Jhansi, Champaran, Jallianwala Bagh, Chauri Chaura, Kakori, Dandi March, GOI Act 1935 etc.). These played a pivotal role in the freedom movement and India's Independence Movement is incomplete without mentioning these.

All students of Zoology Department have participated in this competition. Winners were declared class wise and had received e-certificates.

After the successful submission of answers on submission link, the judgment was done on the basis of number of correct MCQ answers by departmental faculty members.

Faculty of Physical Sciences

DEPARTMENT OF CHEMISTRY

The department of Chemistry came into existence in July, 2015. This department has been established to foster education and research in Chemistry in order to meet the growing needs of qualified and efficient individuals in the country and across the globe.

The department offers undergraduate B.Sc.(Hons.), postgraduate (M.Sc.) and Ph.D. degree. The Department strives to provide national ambience in a local setting. A mentoring based teaching method is being followed in where each student is personally guided so that he or she can reach its true potential. Special NET coaching classes have been regularly conducted. Research projects and practical oriented teaching were supported with the help of an equipped lab infrastructure with all required instruments and chemicals. Adhering firmly to our social commitment, the department conducted research projects on various local issues, such as water pollution.

The Department is supported by exceptionally qualified, and motivated faculty with a strong commitment to teaching and research. All faculty members hold PhD degrees with most of them having postdoctoral experience from reputed institutes in India or abroad.

Faculty

Ser. No.	Name	Designation	Qualification
1	Dr. Sandeep Kumar	Assistant Professor	M.Sc., UGC-NET, Ph.D.
2	Dr. Atul Kumar	Assistant Professor	M.Sc., UGC-NET, Ph.D., PDF KRICT South Korea
3	Dr. Tirtha Mukherjee	Assistant Professor	M.Sc., M.Phil, UGC-NET, Ph.D, PDF (IISc, Bangaluru)
4	Dr. Sandip Saha	Assistant Professor	M.Sc. (IIT, Madras), Ph.D. (IIT, Khargpur), PDF (Taiwan)
5	Dr. Arnab Maity	Assistant Professor	M.Sc., CSIR-JRF, Ph.D. (IISER), PDF (Israel), PDF (SINP)
6	Dr. I Pakhrudheen	Assistant Professor	M.Sc., Ph.D. (University of Madras) PDF (JNCASR), PDF (China)
7.	Ms. Harmanpreet Kaur	Assistant Professor	M.Sc., UGC-NET, GATE

Activities during 2020-21

Webinar on “Applications of Bio-inorganic Chemistry: A Pursuit of Nature to Lab”

A webinar on “**Applications of Bio-inorganic Chemistry: A Pursuit of Nature to Lab**” as part of weekly lecture series was organized by ‘*Chemical Science Society*’ Department of Chemistry, Akal University on 11th November, 2020. Dr.Vimal Kumar from Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology was invited as guest speaker to share their knowledge on applications of Bio-inorganic chemistry in various fields especially in ‘inorganic catalyst designing’.

All the participants had joined the webinar using Zoom Meeting video conferencing platform. A total of 67



participants from Department of Chemistry attended the webinar. Dr. Vimal Kumar emphasized the role of various structural parameters in inorganic catalyst designing in relation to various catalytic applications using metal complexes or metal-organic frameworks with green approach. He also discussed about 'Biomimetics' as an interdisciplinary field which involves nature inspired aspects of chemistry, biology and engineering, for designing and applications of materials. He inspired students to opt research as career and also

presented his studies on the synthesis and application of flexible artificial metal catalyst in the hydrolysis of phospho-diester linkages. At the end of lecture, moderator read the queries written in comment section and speaker were generously answered all the queries raised by students.

Webinar on "CO₂ utilization and conversion to alternate fuels"

A webinar on "**CO₂ utilization and conversion to alternate fuels**" was organized by 'Chemical Science Society' Department of Chemistry, Akal University on 18th November, 2020. Dr. Nandini Devi from Catalysis and Inorganic Chemistry Division, CSIR-National Chemical Laboratory, Pune was invited as guest speaker to share her views on catalysis for sustainable development- alternate fuels.



All the participants had joined the webinar using Zoom Meeting video conferencing platform. A total of 65 participants from Department of Chemistry attended the webinar. Dr. Nandini Devi emphasized global warming due to carbon dioxide has become an issue of great concern. India relies heavily on coal combustion for electricity generation and the electricity emission intensity (926 gCO₂/kWh) is much higher than global average of 533 gCO₂/kWh. Our growing chemical, cement and steel industry also contribute significantly to this. In addition, Government of India is accelerating municipal solid waste (MSW) management and incineration or biogas generation at distributed sites is proposed as a solution. In COP-21, India has committed to reduce carbon emissions by 33 - 35% by the end of 2030. To achieve our nation's commitment on reduction of CO₂ emission and at the same time to become energy independent, it is vital to focus on CO₂ conversions to alternate fuels.

Fuels like methanol and dimethyl ether are attractive alternatives due to advantageous combustion properties. Government of India is also pushing for blending these alternate fuels in transportation and domestic sectors. CO₂ conversion to methanol is possible through either direct hydrogenation or indirect pathway through syngas by reforming. Direct hydrogenation is a high pressure process and conversions reported are low. Adjusting H₂/CO ratio in resultant syngas, appropriate for methanol synthesis is the challenge in CO₂ reforming. Direct hydrogenation to methane also is pursued albeit for strategic applications. Using renewable methods for H₂ production for direct hydrogenation is also suggested and practiced. At the end of lecture, moderator read the queries written in comment section and speaker were generously answered all the queries raised by students.

Webinar on “Nanotechnology for Healthcare”

Chemical science society of the department of chemistry, Akal University organized a webinar on “Nanotechnology for Healthcare”. It was the 3rd webinar of this month as a part of the weekly guest lecture series organised by the department for teachers and students to resonate with modern research trends in chemistry. The guest speaker of the seminar was Dr. Animesh Samanta, Ramanujan-SERB fellow, and assistant professor from the Shiv Nadar University, India. He is currently involved in the development of new fluorescent probes for non-invasive optical imaging such as fluorescence imaging, and SERS imaging. He is also working on nanoparticle-based multimodal optical imaging for the study of cancer and neurodegenerative diseases. The webinar was conducted on Akal University's ZOOM and YouTube live account. Students and faculties of the

department joined the webinar on the Zoom platform and YouTube was open to all audiences. The guest speaker was welcomed by Dr. Sandip Saha, moderator of the webinar. In this webinar, the speaker discussed the history of nanoscience and nanotechnology. He showcased his research on the detection of tumour cells using the novel nanostructured optical probe. Not only limited to his research work but also presented the accounts on the overall progress and role of nanotechnologies for the early detection of various types of cancer cells.

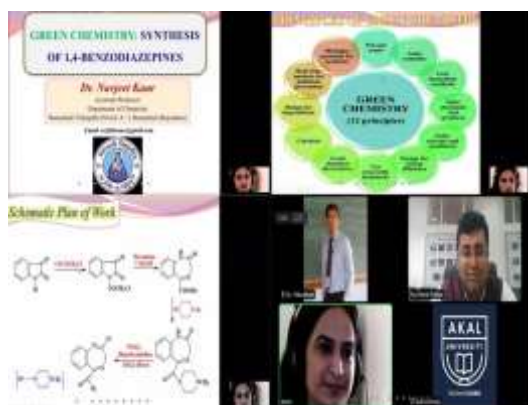
One Day Virtual National Conference on “Recent Trends in Green Chemistry-I”

A virtual national conference on “Recent Trends in Green Chemistry-I (RTGC-2021)” was organized by Department of Chemistry, Akal University, Talwandi Sabo, in view of propagating the awareness of Green Chemistry and sustainable development among students and young researchers, on 27th March, 2021. Total season was divided into two parts; in first season two eminent speakers, Prof. Asit Kumar Chakraborty, Department of Chemistry, IIT, Ropar, Rupnagar, Punjab and Prof. Brindaban Chandra Ranu, Department of Organic Chemistry, IACS, Jadavpur, Kolkata shared their pioneer thoughts in synthetic chemistry coupled with the concept of ‘Green Chemistry’.



Participants from Akal University as well as from other universities had joined the virtual conference using Zoom Meeting video conferencing platform. A total of 91 participants attended the webinar. The webinar was started with warm notes of welcome by Dr. Sandeep Kumar, In-charge, Department of Chemistry for the honourable speakers, faculty members and students. He also acknowledged Akal University administration for providing such a nice platform to conduct virtual conference for the sharing of knowledge. After that Dr. Bubun Banerjee, convener of the conference, gave the brief introduction of the eminent speakers and introduced to the audience.

Prof. Chakraborty gave an overview of new drug synthesis method, green chemistry and sustainable development strategy. He especially emphasize on the principle of green chemistry and how green chemical synthesized method can reduce the level of toxicity to environment. The crucial point of his lecture was 'dual



activation strategy' and how does this help to O-methylation of carboxylic acid in atom economical fashion without generating toxic diazonium salt. Prof. Chakraborty concluded his lecture with benefits of green chemistry not only in environmental protection and human welfare but also for quality of life and sustainable development.

The second speaker of this session Prof. B.C. Ranu introduce two very powerful tools for green chemical synthesis like 'mechanochemistry' and 'visible light photochemistry' in his lecture. Prof. Ranu started with very basic example of green

chemical synthesis of 'Glucose' by plants using environmental CO₂ and water in presence of sunlight. Later on his pointed out that 'Volatile Organic Solvents' that are used in various traditional organic syntheses are the main culprit for nature as well as human being. In his lecture he explained the power of mechanochemical synthesis using ball mill method without using carcinogenic solvents, huge energy requirement, solvent free extraction and no transition metal based catalyst. The great achievement of his techniques benefited with solvent free synthesis of 1,2,3-triazole, Carbon-Nitrogen bond formation and Carbon-Carbon bond formation. In concluding remarks he explained the visible light mediated green protocol for the synthesis of bi-heteroaryls and aryl amines.

The second session was started with Dr. Navjeet Kaur with the title of "Green Chemistry: Synthesis of 1,4-Benzodiazepines". She started her presentation with general introduction to green chemistry and its principles. Dr.Navjeet Kaur especially emphasize on the synthesis of 1,4-Benzodiazepine molecule because of its significant medicinal properties associated with them. She also discussed the structure and synthesis of different derivatives of Benzodiazepine with detailed experimental conditions. Dr.Navjeet Kaur concluded her lecture with the benefits of green chemistry for the synthesis of various heterocyclic compounds and its wide array of pharmacological properties.

The final speaker of this conference Prof. V. Jayathirtha Rao presented his efforts towards the development of green chemistry for the last few decades. He clearly explained about the fundamentals of green chemistry and its principles and it will be very helpful to the students those are studying this subject in their current semester. Prof. V.J Rao also explained about the green synthesis of Baylis-Hillman adduct and its application to syntheses of various pharmaceutically active compounds. Prof. V.J Rao concluded his lecture with benefits of green chemistry not only reduce negative human health and environmental impacts but also offers strategic path to build a sustainable future to the scientific community.



At the end of each lecture, the speakers were generously answered all the queries raised by students. The conference was concluded by Dr.Shantanu Ghosh, Assistant Dean Research, Akal University with vote of thanks to the speakers for imparting valuable knowledge to the students, to all participants and attendees for their observant listening and making the event as uccess. Dr. Sandeep Kumar, In-charge, Chemistry Department also gave his vote of thanks to the speakers and acknowledged Akal University administration for providing such a nice platform to conduct online webinar for the dissemination of knowledge.

DEPARTMENT OF PHYSICS

The Department of Physics has been established with a vision to provide world class education to the undergraduate and postgraduate students, to meet requirements of civilized manpower in physics for teaching, research and other vocations. Currently, the department offers two year M.Sc. & three years B.Sc. (Hons.) degrees in Physics. The Department of Physics also offers Ph.D. programme in areas of experimental and theoretical Physics. The Department has highly competent and qualified faculty members with a diversity of research interests that includes theoretical and experimental Condensed Matter Physics, Radiation Physics, High Energy Physics and Theoretical Nuclear Structure Physics. The faculty of Physics has various national and international research collaborations. In addition to teaching through modern proficiencies, the seminars, workshops and invited lectures are also an integral part of the academic programme of the department.

Faculty

Ser. No.	Name of the Teacher	Designation	Qualification
1	Dr. A.K. Jain	Professor	M.Sc. (Distinction), Ph.D.(BHU), Emeritus Fellow IIT-Roorkee
2	Dr. Sarbjit Singh	Professor	M.Sc., Ph.D.
3	Dr. Sukhjeet Singh	Associate Professor	M.Sc., Ph.D.
4	Dr. Ramandeep Kumar	Assistant Professor	M.Sc. (Hons. School), UGC-NET JRF, Ph.D.
5	Dr. Amandeep Sharma	Assistant Professor	M.Sc., M.Phil, Ph.D.
6	Dr. Ramadeep Kaur	Assistant Professor	M.Sc., CSIR-NET, Ph.D. (IIT-Roorkee)
7	Ms. Raman Duddi	Assistant Professor	M.Sc., CSIR-NET
8	Dr. Mandeep Singh Reen	Assistant Professor	M.Sc., GATE , Ph.D. (Japan)
9	Dr. Mrs.Tapasi Das	Assistant Professor	M.Sc., Ph.D. (IIT-Roorkee)
10	Dr. Janpreet Singh	Assistant Professor	M.Sc., CSIR-JRF, Ph.D. (PU)

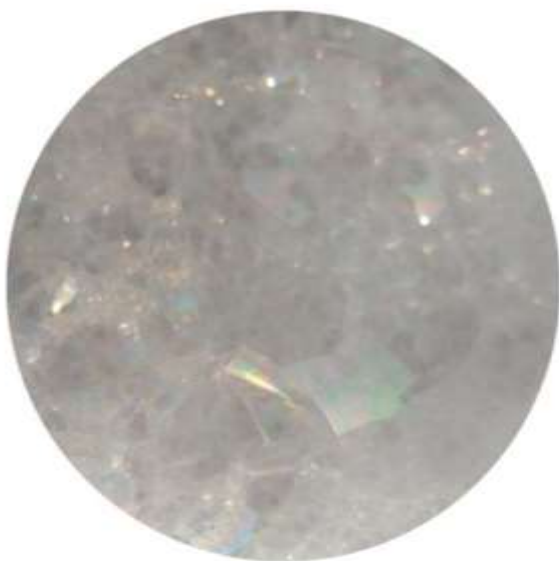
Activities during 2020-21

Webinar on "Role of STI in the pursuit of GOD PARTICLE"

The Department of Physics organized a webinar to commemorate the Science Day. Webinar under the title "Role of STI in the pursuit of GOD PARTICLE" was held on 12th March 2021 at Department of Physics, Akal University. Dr. Ashok Kumar from Delhi University was the invited Speaker. Dr. Ashok started his talk with the introduction to particle physics. Then he explained the standard model to the students and explained to them how different elementary particles were discovered. His main emphasis was to explain about the HIGGS particle to the students. Dr. Ashok explained the curiosity linked with the name of Higgs Boson. He further explained why we call this particle GOD particle and why the discovery of this particle holds so much importance in high energy physics. He also discussed the experimental setup present in the CERN for the discovery of HIGGS BOSON. Not only that, he made the talk very interactive and interesting. The students were able to understand the topic very well and were able to clear their various doubts about the topic.

Photography Competition

Interference of light from different surfaces of bubble is responsible for beautiful colors



An online photography competition was also organized by the physics department to celebrate Science day. The theme of the photography competition was "Impact of Science, technology and innovation on: Education, Agriculture, Household activities, Rural Development and work skills' ". The competition was organized to widen the perspective of students about the contribution of science and technology in their daily life. The photography contest was conducted for all the students of Akal University. The registration date was from 6th March 2021 to 31st March 2021. The details and rules of the competition were circulated to all the departments of the university and a total of 63 students registered in the event. All the entries were taken through Google forms and all the entries were posted on the Instagram page of the Physics Department.

Declamation Competition

The Department of Physics & Department of Computer Science jointly organized the interdepartmental Declamation Competition on the theme of **"India's Struggle For Freedom And It's Reflections In Modern India"**. The aim of this competition is to Celebrate 75 Years of India's freedom anniversary of India's freedom under the theme 'Azadi ka Amrit Mahotsav' and served as an ideal platform for facilitating an exchange of ideas among the student fraternity. The Declamation Contest was conducted for the students of the BSc (Science), MSc (Science), BCA Honors and B.Tech CSE. The poster was circulated among students and almost 20 students participated in the event.

The participants mesmerized the student audience with their vibrant oratory skills. They were made to present their views on diverse topics within the given time limit. They displayed confidence, enthusiasm and awareness while participating in the competition.

The audience was filled with excitement to witness the participants enacting their role models delivering the speeches that were game changing not only in the lives of these great personalities but speeches that are remembered as historic epochs of their times. The participants showed a keen sense of zeal and enthusiasm in being part of the programme and displayed a great control of the moment on the stage as they declaimed the speeches.

Faculty of Mathematics and Computational Sciences

DEPARTMENT OF MATHEMATICS

The Department of Mathematics has been established in 2015 to upgrade the standards of teaching, learning and research to meet the highest levels of excellence and the requirements of today's competitive world. Currently, the department offers two years M.Sc. & three years B.Sc. (Hons.) degree in Mathematics. The Department of Mathematics also offers Ph.D. programme in various research areas of applied and pure mathematics. The Department has highly efficient and energetic faculty. The research specialization spans over Functional Analysis, Operator Theory, Operator Algebra and Fuzzy Optimization, Climate Data Analysis and Disease Modelling. The course curriculum besides theory, also focus on practical knowledge of mathematics by providing computing facilities to the students. In addition to teaching through modern proficiencies, the seminars, workshops and invited lectures are also an integral part of the academic programme of the department.

Faculty

Sr. No.	Name	Designation	Qualification
1	Mr. Rajat Singla	Assistant Professor	M.Sc. (Hons. School), UGC-JRF.
2	Dr. Sukhpreet Kaur Sidhu	Assistant Professor	M.Sc., Ph.D.(Thapar University)
3	Dr. Sandeep Singh	Assistant Professor	M.Sc., CSIR-JRF, Ph.D. (Thapar), PDF (IIT-Roorkee)
4	Ms. Litika Rani	Assistant Professor	M.Sc., UGC-NET
5	Ms. Shilpa Singla	Assistant Professor	M.Sc., UGC-NET, GATE
6	Ms. Radhika	Assistant Professor	M.Sc., UGC-NET
7.	Ms. Alka Munjal	Assistant Professor	M.Sc., Ph.D. (pursuing)

Activities during 2020-21

Special Lecture on "Approximate Solutions to Real-life Problems"

Department of Mathematics, Akal University Talwandi Sabo organized webinar of the Session 2020-2021 under Lecture series-I on November 21, 2020. Under this event department conducted a lecture by "Dr. Kapil Kumar Sharma, Professor, South Asian University, New Delhi" on the topic "Approximate solutions to real-life problems". The main aim of this event was to enhance the knowledge of students about the basic ideas of numerical approximation to many physical phenomena occurring in the scientific literature that models into a differential equation.

Dr. Sharma delivered an excellent and fruitful lecture starting from very basic concept of "Real life problems" in a very interesting way then matched the concept of "Numerical Solutions" with Approximation. He then elaborated the applications of Mathematics in our real life. Students took keen interest in his guest lecture and felt motivated. After the lecture the students discussed their queries with Dr. Sharma and he also motivated students for preparation of competitive exams like NBHM, UGC-NET & GATE etc.



Special Lecture on “Modern Algebra in Real-Life”



Department of Mathematics, Akal University, Talwandi Sabo organized webinar of the Session 2020-2021 under Lecture series-II on December 2, 2020. Under this event department conducted a lecture on the topic “Modern Algebra in Real-Life”. The resource person of this lecture was eminent personality Dr Dhananjay Dey, Associate Professor, Interim Dean (IPR) & Dean (A), Indian Institute of Information Technology, Lucknow. The main aim of this event was to enhance the knowledge of students about the role of cryptography in real life, private key crypto, public key crypto.

Dr. Dey delivered an excellent and fruitful lecture starting from the very basic concept of “Real life problems” in a very interesting way that matched the concept of Basic assumptions. He then elaborated the applications of Mathematics in our real life. Students took keen interest in his guest lecture and felt motivated. During the lecture, students discussed their queries to Dr Dey, and he also motivated students for preparation of competitive exams like NBHM, UGC-NET & GATE etc.

Special Lecture on “Solutions Of Some Olympiad Problems”

Department of Mathematics, Akal University Talwandi Sabo organized webinar of the Session 2020-2021 under Lecture series-I on December 10, 2020. Under this event department conducted a lecture by “Dr. R. C. Mittal, Former Professor And Head Of Department Of Maths, IIT Roorkee” on topic “**Solutions To Some Olympiads Problems**”. The main aim of this event is to enhance the knowledge of students about the basic ideas of Olympiad exams which motivate the student towards academic improvement to develop scientific temperament and inculcate the problem-solving tricks among the audience. Prof. Mittal delivered an excellent and fruitful lecture starting from very basic concept on “Olympiad problem” in a very interesting way and discussed that how the designing of these questions is important. He then discussed the solution of few Olympiad problems with the students. Students took keen interest in his guest lecture and feel motivated.



After delivering a lecture on the topic the students discussed their queries with Prof. Mittal and he also motivated the students for preparation of competitive exams like NBHM, UGC-NET & GATE etc.

Poster Making Competition on theme of “Pi-Day”

Department of Mathematics, Akal University Talwandi Sabo organized poster competition on 12th March 2021 under the “MATHRIX SOCIETY”. In this event, total eighteen teams have participated. There were two students in each team. The theme of the poster was based on Pi-day.



Three-day National workshop on “MATLAB and LATEX softwares”

The Akal University organized a three-day workshop on the theme “MATLAB and LaTeX Software’s” where esteemed Faculty / Professors from the university were invited to speak on the theme. The workshop provided exposure to the participants and provided a chance to enhance their knowledge of the MATLAB and LaTeX Software.

In these three days of workshop, Dr. Ramjiwari, the resource person started the workshop with topic of introduction of the MATLAB software (What is MATLAB, MATLAB Components, Workspace, Command History, Command Window, Command Files, Script File, M-file), Basic operations (Scalars, Vectors, Matrices, Built in Functions for handling Arrays, Mathematical operations on Array (Addition, Subtraction, Multiplication, Division). Next day his topic was plotting 2D- 3D Data Plotting, Function Plotting, Various commands for Plotting, Formatting of Plots in MATLAB. After tea break, he again started his discussion with a recap of the previous day session. He continued his talk about the Creating a function file, Structure of a function file, Input and Output arguments. Conditional statements Loops.

Later, Dr. Sandeep Singh. came up with his topic on the basic introduction of the LaTeX (why Latex, Basic Document creation, Class files, Geometry of Document,) Sections Subsections, Title creation, Font Styles, Sizes and Colors, Spacing, enumerate commands, Different Types of Alignment, Mathematical environment, how to insert equations, Tables, Matrices, Images.).

On the last day, the workshop started with Dr. Parshant Singh Rana’s topic “Page, Report, Article, Thesis writing. Footer, Header, References, Cross References management in Latex file”. And the last speaker was Dr. Suraj Goyal. He talked about Beamer and us to understand the uses of the Latex software.

Power Point presentation Competition to commemorate 75th Independence Day

Department of Mathematics in Collaboration with National Service scheme (NSS), Akal University organized a “PPT Presentation Competition” to commemorate the 75th anniversary of India’s freedom under the theme ‘**Azadi ka Amrit Mahotsav**’ on 15th May 2021 to explore the presenting skills of students. All the students of the Department instructed to submit PPT as per rules conveyed to them. The competition was open to all the students of department of Mathematics. Total 14 students participated in the competition and the best PPTs were adjusted as first, second and third by judges. All the students were distributed e-certificate for participation.



Faculty of Economics, Management and Commerce

DEPARTMENT OF ECONOMICS

The Department of Economics has been established in 2015, with an aim to enhance the intellect of the students enabling them to critically examine the issues related to the economy of India and the rest of the World as well. In order to accomplish the goal of building up the overall development of the personality, students have been trained to think analytically about socio-economic issues with the help of every possible advanced teaching technique. Building up a sound base for further study and career in Economics is also focused upon.

The department constitutes of well qualified and proficient faculty members. All the faculty members have contributed academically by publishing extensively in research journals of repute and other professional publications. The publications of the faculty members of the Department of Economics are in the form of books, articles, working papers, etc. reflects their keen interest in economic issues of academic and public interest.

The department is well equipped with advanced teaching aids to train the students in the best possible manner. It is not only the lectures by the faculty members, but the guest lectures organized by the department and delivered by the Visiting Professors such as Prof. A.S. Oberai, Regional Director (former) UNO (ILO) and Prof. Iqbal Singh (Retd. Professor, University of Delhi) serves the purpose of enhancing the intellectual level of the students.

The department aims towards the overall development of the students by making them competitive, intellectual and efficient with the best possible training initiatives.

Faculty

Sr. No.	Name of the Teacher	Designation	Qualification
1	Prof. A.S. Oberai	Professor of Eminence	M.Sc. (London School of Economics), Regional Director (Former) UNO (ILO), Geneva, Switzerland
2	Dr. Kanika Ratra	Professor	B.A. (Hons.), M.A., UGC-NET, Ph.D. (JMI, Delhi)
3	Dr. Pavneet	Assistant Professor	M.A., M.Phil., Ph.D. (CUP)
4	Dr. Suresh M	Assistant Professor	M.A. (Madras), M.Phil., UGC-NET, Ph.D. (CU Hyderabad)
5.	Mr. Amandeep Singh	Assistant Professor	M.A., UGC-NET, M.Phil. (pursuing)
6.	Mr. Harmenender Singh	Assistant Professor	M.A., UGC-NET
7.	Ms. Ishu Goyal	Assistant Professor	M.A., UGC-NET
8	Mr. Mohamad Aslam	Assistant Professor	M.A., M.Phil., UGC-NET, Ph.D. (pursuing)

Activities during 2020-21

Online Collage Making Event

We are going to celebrate seventy-five years of India's Independence as 'Azadi Ka Amrit Mahotsav', and this celebration is devoted to the vision of building a new and Aatam-Nirbhar Bharat by 2022. To commensurate the monumental occasion, Economics Department, Akal University has organised an **Online Collage Making Competition on 29th of May, 2021**. The theme of competition was '**Swadeshi Movement to Aatam-Nirbhar Bharat: Reinventing Self-Reliance**', which covered the sub-themes as:

- a) Swadeshi Movement against British Rule;
- b) Historical Significance of Swadeshi Movement;
- c) Swadeshi 2.0: Make in India;
- d) Aatma Nirbhar Bharat Mantra- Self Reliant India

Number of participants, who have registered and participated in this event were 41. These students were from the Economics Department only. All the participants had been issued e-certificates and the three winners had also been selected, who were honoured with prizes.



The Divergent Perspectives of Labour & Wages in Economics

A online Webinar session on '**The Divergent Perspectives Of Labour & Wages In Economics**' was hosted live on 11th July 2020 by the Department of Economics at the Akal University YouTube Channel and Zoom. There were more than 100 participants from Akal University and other institutions. The Key Speaker of the session was Dr Alex M.Thomas (Assistant Professor, Azim Premji University). Dr Alex discussed about the development of idea labour and wages from classical school to neoclassical and lastly Keynesian school. The speaker has inculcated interest among students and faculties to study history of economic thought.



Dr Alex began the session with discussion on present crisis due to lockdown on migrants and wages in the country. Speaker emphasised on conception framework on wages and labour. The lecture focused on two school one is mainstream (neoclassical) and heterodox economics (Classical, post Keynesian and old institutional economics). He explained the demand and supply in labour market among marginalist economics and classical economics. Supply of labour among marginal school based on labour-leisure calculus and demand of labour based on marginal product of labour. He emphasised wage cut and greater profit was origin from endogenous model (Marginalist model). According to classical economics wages are determined by social and cultural factors. There was no idea of margin in classical economics except Ricardo with perspective to land. Uncritical marginalist economics education leads to ideas of lowering wages with individual and economy as whole. Marginalist macroeconomics has expanded in form of new Keynesian macroeconomics. Dr Alex described that new Keynesian economics unemployment arises from an obstruction of the market mechanism. Classical and Keynes argued that unemployment is consequences of market mechanism. Dr Alex briefly explained the other wages and labour theories such as efficiency wages and insider-outsider model. The speaker concluded the lecture by differentiating between classical and marginalist school.

Covid19 And Indian Economy

A online Webinar session on **Covid19 And Indian Economy** was hosted live on 29 Oct 2020 by the Department of Economics, Akal University at the Akal University YouTube Channel and Zoom. There were more than 100 participants from Akal University and Other institutions. The Key Speaker of the session Prof. K. Jothi Sivagnanam (Dean & Professor, University of Madras). Prof Jothi Sivagnanam discussed about the present day crisis due to Covid19 pandemic in Indian Economy. The speaker has inculcated interest among students and faculties to study on Indian Economy

Prof Gurmail Singh, the Vice-Chancellor, Akal University introduced the topic of the Session. Prof Jothi started the session with discussion on present crisis due to lockdown on migrants and employment in the country. Speaker explained about the epic curve of the flattening of containment and social distancing. Containment Polices flattens the medical curve but steepens the recession curve. Covid19 restriction has created multiply restriction in circular flow of the income. Professor discussed about the Aatam Nirbhar Bharat Abhiyan Stimulus package. MNREG registration has increased within the 6 months .Pandemic has hardest affected the employment of small traders and wage earners. An estimate shows that more 12.2 crore people have lost the jobs in the lockdown period. India is facing a situation of stagflation and output stagnation which the recent RBI reports also reports. He also talked about the neighbouring countries where better in the management of the covid19 than India. Speaker also discussed about the second stimulus package and way forward. He also suggested some ways for improving the economy like Relief expenditure to protect the poor and marginalised like migrant workers and informal sector workers, Demand supporting expenditure to support SMES, rural and agricultural sector, Union government should immediately provide a Covid grant for states to protect people from the health challenges imposed by corona virus. He also suggest some references for further reference to the students and faculty. It was enlightening lecture for students and faculty.

Water Resources Management, Water: Challenges for Youth in Future

A online Webinar session on **Water Resources Management, Water: Challenges for Youth in Future** was hosted live on 10 Oct 2021 by the Department of Economics at the Akal University YouTube Channel and Zoom. There were more than 50 participants from Akal University and Other institutions. The Key Speaker of the session Prof K. Siva Subramaniyam (Professor, MIDS, Chennai). Prof Siva Subramaniyam discussed about the present day crisis water crisis about the water resources in India and Tamil Nadu. Prof. Siva Subramaniyam presentation of water elaborates details in the various aspects such as Annual hydrological cycle: World and India, Rainfall – The basic source of water, Facts of water & Why youth to be involved in water conservation, New research studies on irrigation theories, etc.



Impact of Covid – 19 on Indian Economy: Migration, Employment, Inequality and Health Status



An online webinar session on Impact of Covid – 19 on Indian Economy: Migration, Employment, Inequality and Health Status was hosted live on 04 May 2021 by the Department of Economics at Akal University YouTube Channel and Zoom. There were more than 75 participants from Akal University and other Institutions. The key speaker of the session Prof. A.S. Oberai, Former Director, UNO-ILO Geneva. Prof. A.S. Oberai discussed the present situation that has been facing by the World as well India of Covid – 19. They highlighted key issues of the Impact of Covid – 19 on Indian Economy: Migration, Employment, Inequality and Health Status.

Prof. Oberai started the session by raising an important question i.e. 'Is it possible to assess the impact of the Covid-19? Answer is- no, it is not possible to assess the impact of this pandemic within a short span but we can assess the overall situation it has created. Then speaker discussed on the visible impacts of this pandemic on the GDP growth rate of the different economies of the world and their comparison with the Indian economy. Investment is coming down due to fall in GDP and this is creating a downward spiral in the economic activities. About the stimulus package, expert shared the scenario prevailing in the other developed countries of the world, Govt. of other nations are assisting their citizens and industrialists with cash transfers in order to maintain their minimum standard of living. In India, although govt. has planned and implemented stimulus package for revival of MSMEs and migrant workers, still MSMEs couldn't survive due to demand crunch.

Prof. Oberai discussed about the facts and realities related to migrant workers, unemployment problem, inequality, poverty and health issues. According to him, pandemic has hardly affected the informal sector workers in the Indian economy, urban unemployment has increased to 10 percent and 50-60 million workers are facing open unemployment. About poverty, he viewed that after the introduction of economic reforms, about 45 percent of the Indian population was suffering from the poverty and this share came down to around 25 percent (2011-12) and it is supposed that by year 2024, headcount ratio will come down to single digit. But pandemic has pushed the masses to below poverty line. Prof. also highlighted the situation of inequality in the country. On health front, less than 5 percent of GDP is spent on the health sector in India, this is already lower than other countries of the world and is creating a problem in coping up with this pandemic. Speaker also suggested for some ways for improving the economic condition of the economy like- trade should be promoted in this globalised era, as it will push the economy on the growth path, sufficient cash transfers to the migrant workers and MSMEs for their upliftment. Prof. Oberai also discussed about the future growth aspects of the Indian economy. Overall, it was enlightening lecture for students and faculty members. Students and faculty members actively participated in the question-answer round.

DEPARTMENT OF COMMERCE

The department of Commerce was established in 2015 with a vision to provide world class education to the young minds and prepare them to be self reliant by serving the society in the field of commerce. The department has been at the forefront in responding to the industry needs by swiftly devising new courses or revising the syllabi of existing courses to make students industry-ready. Currently, the department offers two-year M.Com. and three –years B.Com. (Hons.) degrees.

The department has highly competent and efficient faculty members with diversified research interests. The classrooms are well equipped with audio-visual aids. The conceptual knowledge is ensured by conducting group discussions, case studies, roleplays, mock-interviews and other group activities. The welfare of the students is promoted by the teachers as well as the student counsellors who interact with students for frequent feedback, problem-sharing and counselling. In addition to teaching through modern proficiencies, the seminars, workshops and guest lectures are also an integral part of the academic programme of the department. The courses lay stress on vital subjects like accounting, taxation, computer application, banking, managerial economics, business law, e-commerce, e-banking, business communication, statistics and corporate law. The faculty's enthusiasm to impart quality education is reflected in the students' keen interest in academics.

Faculty

Sr. No.	Name of the Teacher	Designation	Qualification
1	Mr. Khushdil Chabbra	Assistant Professor	M.Com., UGC-JRF, Ph.D. (pursuing)
2	Ms. Pahuljot Kaur	Assistant Professor	M.Com., UGC-NET
3	Dr. Mohd.Tanzeem Raja	Assistant Professor	M.Com., M.Phil., Ph.D., Maulana Azad Fellowship Awardee
4	Dr. Parminder Singh	Assistant Professor	M.Com., MBA, UGC-JRF, Ph.D.
5.	Dr. Harmandeep Singh	Assistant Professor	M.Com., UGC-JRF, Ph.D.
6.	Dr. (Mrs.) Hem Lata	Assistant Professor	M.Com., UGC-NET, Ph.D.
7	Mr. Shivam Goyal	Assistant Professor	M.Com, UGC-NET (JRF)

Activities during 2020-21

Webinar on “Want to Know Career Prospects in Commerce and Economics?”



With the aim of providing knowledge about the Career Opportunities in the field of Commerce and Economics, Department of Commerce, Akal University, Talwandi Sabo has organised Webinar on “Want to know Career Prospects in Commerce and Economics” on 17th November 2020. More than 200 Students and Faculty joined this webinar over ZOOM and Youtube Live platform in order to make this event successful. The expert for the webinar was CS Shaifali Bhatia who has vast experience in Teaching and She is Company Secretary and GST Practitioner by Profession also.

CS Shaifali focused upon major thrust areas like Career Options, Interviews, Stock Markets, Certificate Courses etc. She explained the various options after Commerce and Economics like There are many queries by students on Interviews, future options, Certificate Courses, Online Study etc. and she also asked many queries from students which makes this session very interesting.

The webinar was moderated by Head of Department (Commerce), Ms. Pahuljot Kaur Sidhu. On the whole, the event was a great success with successful initiation of worthy discourse about the strong holistic development and Career options.

Webinar on “Applications of Robotic Process Automation in Commerce & Business”

With the aim of providing knowledge about the role of Robotic Process Automation in current scenario, Department of Commerce, Akal University, Talwandi Sabo has organized Webinar on “**Applications of Robotic Process Automation in Commerce & Business**” on 21st November 2020. More than 150 Students and Faculty joined this webinar over ZOOM and YouTube Live platform in order to make this event successful. The expert for the webinar was Dr. R.K. Tailor who has vast experience in Teaching and he is currently working as Associate Professor, Department of Business and Commerce, Manipal University, Jaipur.

Dr. Tailor focused upon major thrust areas like Robotics in the field of Commerce, Business and in the field of jobs. He also stressed upon the issue that Robotics Process Automation has totally flipped the Business Processes and Every day's life. He also explained that how technology has impacted our each and every minute of life. There are many queries by students on coming future of Robotics Technology in Commerce and how they will be beneficial for the business if they adopt. Dr. Tailor answered the queries with the help of practical examples which makes the Webinar more interesting.

The webinar was moderated by Head of Department (Commerce), Ms. Pahuljot Kaur Sidhu. On the whole, the event was a great success with successful initiation of worthy discourse about the Application of this Robotic Process Automation in the coming future.



World AIDS Day

Department of Commerce, Akal University organized a Powerpoint Presentation Competition on Worlds AIDS Day – 1st December, 2020. In this competition, the PPT was submitted by different students of the Commerce department. Out of these, three best PPTs were selected as first, second and for third position.

World Heritage Day 2021

Department of Commerce, Akal University organized an Online Poster Making Competition on World Heritage Day 2021 - 16th April 2021. To celebrate 75 years of India's Independence—Azadi Ka Amrit Mahotsav The theme of this competition was – “**Heritage Monuments of India Before and After Independence**”. This competition was open to all students of the university and total 21 posters were received from the students. Out of these, four best posters were adjudged as first, second and 2 places for third position.



Faculty Achievements

1. Dr. Parminder Singh, Assistant Professor participated in Faculty Development Program on “Moodle Learning Management System.”
2. Dr. Parminder Singh, Assistant Professor participated in Webinar (9th July, 2020) on “Research Oriented Technical FDP Program - A Paradigm of Research from Synopsis to Thesis.”
3. Dr. Parminder Singh, Assistant Professor participated in Webinar (26th July, 2020) on “Academic Learning Resources and Academic Integrity”.
4. Dr. Parminder Singh, Assistant Professor participated in National Webinar (26th August, 2020) on “Survival of Economy on in Emerging Scenario.”

5. Dr. Parminder Singh, Assistant Professor participated in Online Teaching Learning on "Design, Delivery, and Development of e-content and Online Assessment" (20-25 July, 2020).
6. Mr. Shivam Goyal, Assistant Professor attended the webinar on Effective Finance Management held on 3rd Jan 2021, organized by Zerodha Partner.
7. Mr. Shivam Goyal, Assistant Professor participated in 7 days FDP program From 16th October to 8th November 2020, Organised by Ramanujan College, the University of Delhi on "Direct Tax and GST".
8. Mr. Shivam Goyal, Assistant Professor Attended an online workshop on Mastering Excel organized by Chitkara University on 26 and 27 September 2020.
9. Mr. Shivam Goyal, Assistant Professor Attended FDP on GST using Tally.ERP 9 organized by Tally Education Pvt. Ltd. (October 1, 2020).
10. Mr. Amanjeet Singh Bhandari, Assistant Professor successfully completed 1 week FDP on "Advanced Excel with Data Visualization" at Akal University- (January 11 – 16, 2021).
11. Mr. Amanjeet Singh Bhandari, Assistant Professor attended FDP on GST using Tally. ERP 9 organized by Tally Education Pvt. Ltd.(October 1, 2020).
12. Mr. Amanjeet Singh Bhandari, Assistant Professor attended FDP on ICT Enhanced Teaching Learning and Creating MOOCS by Teaching Learning Centre, Ramanujan College, University of Delhi from 18th August to 25th August 2020.
13. Mr. Amanjeet Singh Bhandari, Assistant Professor delivered an Expert talk on How to prepare for UGC NET at Baba Farid College in March 2021.
14. Mr. Amanjeet Singh Bhandari, Assistant Professor completed Online Course on Introduction to Internet of Things by Stanford Center for Professional Development on 19th January 2021.
15. Mr. Amanjeet Singh Bhandari, Assistant Professor Completed Online Course on Knockdown the Lockdown by TCS.
16. Mr. Amanjeet Singh Bhandari, Assistant Professor completed Online Course on Managing the Personal Finance by MC Gill University, Canada.
17. Mr. Amanjeet Singh Bhandari, Assistant Professor attended Online FDP under AICTE ATAL on Organizational Behaviour from 15th February 2021 to 19th February 2021.
18. Mr. Amanjeet Singh Bhandari, Assistant Professor attended Online FDP under AICTE ATAL on Innovation Management from 22nd February 2021 to 26th February 2021.
19. Mr. Amanjeet Singh Bhandari, Assistant Professor attended Online FDP under AICTE ATAL on Learning Management System from 15th March 2021 to 19th March 2021.
20. Ms. Harjot Kaur, Assistant Professor successfully completed 1 week FDP on "Advanced Excel with Data Visualization" at Akal University- (January 11 – 16, 2021).
21. Ms. Harjot Kaur, Assistant Professor achieved certificate of Merit for online course on "Research & Data Analysis" organized by Accounting & Finance Lab, Department of Commerce, Ramanujan College, University of Delhi (June 15-21, 2020).
22. Ms. Harjot Kaur, Assistant Professor attended certification exam on "The Fundamentals of Digital Marketing" organized by Google and IAB Europe (April 24th, 2021).
23. Ms. Harjot Kaur, Assistant Professor attended FDP on GST using Tally. ERP 9 organized by Tally Education Pvt. Ltd.(October 1, 2020)

Students' Achievements

B.Com. (Hons.) Batch 2021-2024

S. No.	Course	Achievements	No. of Students
1.	B.Com.	Introduction to Business Management- King's College London	13
2.	B.Com.	Business Futures: Sustainable Business Through Green HR RMIT University	01
3.	B.Com.	TCS iON Career Edge Young Professional Course	1
4.	B.Com.	Pendu Khed and Lok Kalavan Mukable	6

B.Com. (Hons.) Batch 2020-2023

S. No.	Course	Achievements	Number of Students
1.	B.Com.	McGill Personal Finance Essentials Course on 29 th May 2021. 10	23
2.	B.Com.	TCS iON Career Edge Young Professional Course on 9 th June 2021-14 th June 2021.	9
3.	B.Com.	Fundamentals of Digital Marketing Certification Exam on 23 rd April 2021.	27
4.	B.Com.	Painting Competition under the theme Azadi Ka Amrit Mahotsav on 9 th June 2021 (Secured 2nd Position) .	1
5.	B.Com.	Recorded Video Competition under the theme Azadi Ka Amrit Mahotsav (Secured 2 nd position).	1
6.	B.Com.	Poster Competition on World Heritage Day-16 th April, 2021 (Secured 2 nd position)	1

B.Com. (Hons.) Batch 2019-2022

S. No.	Course	Achievements	No. of Students
1.	B.Com.	TCS iON Career Edge Young Professional Course (09 June, 2021- 24 June, 2021)	24
2.	B.Com.	Fundamentals of Digital Marketing Certification Exam (Google Digital Unlocked)October, 2020.	30

M.Com. (Hons.) Batch 2021-2023

S. No.	Course	Achievements	No. of Students
1.	M.Com.	Certificate course completed McGill Personal Financial Essentials from McGill University , Canada 29 th May 2021.	2
2.	M.Com.	Certificate course of Digital Marketing from Google 23 rd April,2021.	1
3.	M.Com.	Secured first position in SikhiGyaanPrikhya	1
4.	M.Com.	Book published: Title: "Khayalan Di Saltanat"; September 26, 2020; Publisher: Azaad Publisher	1
5.	M.Com.	Book review published in magazine: Punjab Times October 22, 2020	1
6.	M.Com.	Poem published in e- magazine: 'Harafnama'; Title: "Ni Kudiye" on June 19, 2020	1

Faculty of Indian and Foreign Languages

DEPARTMENT OF ENGLISH

The Department of English Studies established in 2015, reflects the expansion, diversification and confluences at both the institutional level as well as in the dynamic disciplinary fields of literary and cultural studies and linguistics. The objective of the Department is to teach focused courses in these core areas at undergraduate and masters levels, and also a well-focused research program at doctoral and post-doctoral levels. The main emphasis is to inculcate professionalism in students, as part of a discipline with skills and abilities valuable in teaching, research, publishing and business. Further, the Department aims to give students a sense of themselves as citizens of a larger community by encouraging participation in the service of learning. Currently, the Department offers Ph.D. in English Studies, M.A. in English and B.A. (Honours) in English. These programmes have also come to limelight for their unique design and relevance in the contemporary Indian as well as the International literary scenario.

Duration of the B.A. English (Hons) program is six semesters (three years). The program intends to

- train students in communication skills in English.
- introduce students to the tools of literary scholarship.
- strengthen their ability to analyze all forms of literary expression.
- prepare them for careers and higher education.

Duration of M.A. programme is four semesters. It enables students to develop a holistic understanding of literatures in English. It also introduces the students to the tools of research and broadens their critical sensibilities. Further, it equips them for career opportunities as well as for further research.

The department also offers Ph.D. program in various research areas of language sciences, literary and cultural studies, and also interdisciplinary areas that influence language and society.

The Department has highly competent and efficient faculty members with a diversity of research interests. The faculty of English Studies has various national and international research collaborations. To enhance the competency of the students, in addition to the classroom lectures, the department also utilizes seminars, workshops and invited lectures as integral part of the academic programme.

The department also provides acute mentoring of the students both in and beyond the classroom in a wide variety of forums. These activities promote a healthy, holistic development of the student. Moreover, the department has a club "AN EXTENDED HAND" for helping the weak students in improving their English language skills. As an extension of this initiative, to provide a platform for students for mutual exchange of ideas, knowledge and skills, the department has also started the programme "WE WILL".

Faculty

Sr. No.	Name	Designation	Qualification
1	Dr. Shantanu Ghosh	Associate Professor	M.A.(JNU), M.Phil, Ph.D. (JNU), PDF (Max Planck Institute Netherlands), HST-MIT Fellow Research Asst. Prof. (Harvard, USA)
2	Mrs. Manika Arora	Assistant Professor	M.A., UGC-NET, pursuing Ph.D.
3	Dr. Farhan Ahmed	Assistant Professor	M.A., Ph.D.(AMU), Diploma in Linguistics, B.Ed.
4	Dr. Tania Bansal	Assistant Professor	M.A., M.Phil., Ph.D.(CUP)
5	Mrs. Adishree Vats	Assistant Professor	M.A., Ph.D. (pursuing)
6	Ms. Ravneet Kaur	Assistant Professor	M.A., M.Phil.
7	Dr. Anil Kumar	Assistant Professor	M.A., M.Phil., UGC-NET, Ph.D.

Activities in 2020-2021

ONLINE WEBINAR TO COMMEMORATE 75 YEARS OF INDIA'S INDEPENDENCE: AZADI KA AMRIT MAHOTSAV

To celebrate 75 years of India's Independence—**Azadi Ka Amrit Mahotsav**, Akal University's Literary Society of Department of English Studies organized a "One hour online webinar on India's freedom struggle" on 12 March 2021, the anniversary of the beginning of Gandhiji's famous **Salt Satyagraha** and the **Dandi March**. The celebration is a part of the nationwide initiative by the Government of India that commemorates the 75 years of our country's attainment of freedom from British rule. The webinar was also streamed live on the University's YouTube channel.

The invited speaker of the online webinar for the occasion was **Shri Himanshu Shekhar, Senior Journalist**, who is the Senior Editor (Political & Current Affairs) with NDTV.

In his talk Mr. Mishra started with the focus on the ethos of democracy since 1947 and the long and gradual process of strengthening of the democratic institutions, to how India has grown into the largest democracy in the world, with a proliferation of traditional print and electronic media, and now social media. He stressed on **Mahatma Gandhi's philosophy** and canon of journalism and his contribution as a journalist, and how he evolved a strategy to utilize the press as a weapon of satyagraha. This was illustrated by numerous quotes of Gandhiji from his autobiography, *My Experiments with Truth*. The speaker stressed on how 'Young India' and 'Harijan' became powerful vehicles of Gandhiji's views on all subjects.

On several occasions, the speaker referred to the **Hon'ble Prime Minister Shri Narendra Modi** launching the 'Azadi Ka Amrit Mahotsav' from **Sabarmati Ashram**, Gandhiji's **Karmabhoomi**, symbolizing the Dandi March and celebrating our freedom struggle for the next 75 weeks, at the time this webinar was in progress.

The speaker also highlighted how the freedom of the press was of utmost importance as it was a powerful tool to propagate political ideas since the early 19th Century, and shared his experience as a reporter of covering the Parliament and the State and General elections. He talked about his work on civil-military relations in Algeria and also South Asian countries, and compared it to the **democracy** that exists in **India**. The speaker ended his engrossing talk by focusing on mechanisms of how national, regional and local media institutions will need to work in unison to create a **national discourse**.

The talk was followed by one of the rarest footages of Gandhiji's first interview to the press, being broadcast as part of the event. This was followed by a **Discussion/Q&A session**.

Several interesting questions were asked by the audience, and the ensuing **discussion** ranged from *the relevance of the freedom struggle for the present generation, to the symbolism of Dandi March, to the role and responsibility of the political opposition, to the press as a mechanism to spread national consciousness*.

Seminars/ Symposia attended in other institutes/ universities

Title of Talk/ Lecture	Seminar/ Conference/ Symposium	Venue	Date(s)
Dr. Shantanu Ghosh			
How to do psycholinguistics and neurolinguistics with neuroimaging tools	Invited Seminar Talk	Department of Linguistics, Central University of Rajasthan, Kishangarh, Rajasthan	25 January, 2021
Role of Information Technology in Public Health	International Conference on Public Health Plenary Lecture (Online)	Mel & Enid Zuckerman College of Public Health, University of Arizona & Navrachana University	26 March, 2021
Tagore and Humanism	Invited Lecture on the occasion of 160 th Birth Anniversary of Rabindranath Tagore (Online)	Department of English, Punjabi University, Patiala	7 May, 2021

DEPARTMENT OF PUNJABI

The Department was established during the first academic session of the university in 2015-16. From the very first academic session B.A. (Hons.) and M.A. (Hons.) courses have been offered by the department and since second session Ph.D. programme is also offered. The main objective of this department is to teach Punjabi language at the undergraduate and postgraduate levels in such a way so that the students at later stage take up the research activities keeping in mind the dialectical, social and cultural academic issues.

Faculty

Sr. No.	Name	Designation	Qualification
1	Dr. Sandeep Singh	Assistant Professor	M.A., UGC-NET, M.Phil., Ph.D. (Delhi University)
2	Mr. Harjinder Singh	Assistant Professor	M.A., UGC-NET, M.Phil., Pursuing Ph.D.
3.	Dr. Somi Ram	Assistant Professor	M.A., UGC-JRF, Ph.D.
4.	Mr. Navsangeet Singh	Assistant Professor	M.A. (Gold Medalist), M.Phil.
5.	Ms. Jaswinder Kaur	Assistant Professor	M.A. (Gold Medalist), M.Phil. (Topper), UGC-JRF, M.A. (Sikh Studies), B.Ed., Ph.D. (submitted)
6.	Ms. Ramandeep Kaur	Assistant Professor	M.A. (Punjabi), UGC-JRF, Ph.D.(pursuing)

Activities during 2020-21

Essay Competition

A series of programs were organized by the Punjabi Department, Akal University, Talwandi Sabo on the observance of Punjabi month as per the instructions of the Director Education (Colleges), Punjab. Under this series, an essay competition on the topic of online Punjab, Punjabi and Punjabiati was conducted on 10 November 2020. The students submitted their works featuring the present challenges of Punjabi language and its future with subtle and original ideas.

The first place in the essay competition was won by Simranjit Kaur (BA, Part-II) and the second place was won by Balpreet Kaur (BA, Part-III). Third place went to Kulwinder Singh (MA, Part-I) and Anjam Kaur (BA, Part-III). In addition, Simranjit Kaur (BA, Part-I) and Sarabjit Kaur (BA, Part-I) were encouraged to write good essays. The winning students were then awarded medals and certificates.

New National Education Policy and Punjabi Language

A series of programs were organized by the Punjabi Department, Akal University, Talwandi Sabo on the observance of Punjabi month as per the instructions of the Director Education (Colleges), Punjab. Under this series a webinar on "National Language Policy and Punjabi Language" was conducted on 20th November 2020.

All the students of Punjabi department participated in this webinar. The keynote speaker was Prof. Joga Singh. He discussed in detail the teaching of languages in the new National Education Policy. He said that although in this new education policy there is talk of giving more importance to mother tongues and it is also proposed to give basic education in mother tongue but at the same time there are no rules about the steps required for its practical implementation. He also expressed concern over whether private schools in Punjab would provide basic education in Punjabi medium under this policy. He said that Punjabi language has an important place in education and for its overall development it must be made a vocational language which would further increase the love and respect for Punjabi language.

Poetry Writing Competition

A series of programs was organized by the Punjabi Department, Akal University, Talwandi Sabo on the observance of Punjabi month as per the instructions of the Director Education (Colleges), Punjab. Under this series online poetry writing competition on the subject of Punjab, Punjabi, Punjabiat was organized on 27th November 2020 in which a large number of students from different departments participated. The competition was online, but a large number of students enthusiastically took part. Poet students sent very sensitive future compositions through online medium.

The first place in the poetry writing competition was won by Matwal Singh of Commerce Department, second place by Jaswinder Kaur of Punjabi Department and Princepreet Singh of Economics Department. Third place went to Sarabjit Kaur of Punjabi Department. Apart from this, Lovepreet Singh of Economics Department and Simaldeep Kaur of Punjabi Department were encouraged to write good poetry. The winning students were then awarded medals and certificates.

Special Lecture

Akal University has regular activities to keep the students abreast of the times. Literary activities are conducted from time to time by the Punjabi Department of the University. On the occasion of the commencement of the new session in this series, Dr. Nitu Arora arrived on 13.2.2021 to give a special lecture. Dr. Nitu Arora is known in contemporary literary society as a teacher, poet and feminist thinker. On this occasion the 13th issue of Aagaz Kandh Patrika was also presented by the department dedicated to Nitu Arora.



Dr. Nitu Arora addressing the students conversed about fundamental questions through various interesting examples about what to read, why to read and how to read, etc. She discussed in detail the issue of real knowledge and the obstacles in the way of acquiring it. She also shed light on various subject related facts with reference to personal experiences. The deep questions asked by the students created a serious conversational atmosphere, which was enjoyed by the entire audience. The program was attended by students and teachers from various departments.

Face to face

Akal University has regular activities to keep the students abreast of the times. Literary activities are conducted from time to time by the Punjabi Department of the University. In this series, a program dedicated to International Mother Language Day was held on 25 Feb 2021, in which Gurtej Koharwala, a teacher from RSD College, Faridkot and a leading contemporary poet came face to face with the students.



Addressing the students, Gurtej Koharwala first discussed the language, the structure of the language, the importance of the mother tongue and the contemporary difficulties of the mother tongue path with relevant and interesting references. He then shared his personal experiences on what ghazal or poetry is as a poet, the process of its existence, its purpose, and also the views of world class poets on the existence of poetry. He created serious dialogue through various interesting examples of the most fundamental questions of the composition process. The in-depth questions asked by the students added to the seriousness of the conversation, which was enjoyed by the entire audience.

Faculty of Arts

DEPARTMENT OF PSYCHOLOGY

The department of Psychology was established in this university in 2016 with an aim of developing an understanding of the growing discipline of psychology and promoting skill based education. An important goal of this department is to facilitate self-discovery in the students and ensure their enthusiastic and effective participation in responding to the needs and challenges of the contemporary world. The department intends to enable students in developing skills and competencies required for the holistic development.

Currently, the department offers two-year M.A. Programme and three-year B.A. (Hons.) degrees in Psychology. The teaching pedagogy is student centric and professionally moduled.

Faculty

Sr. No.	Name of the Teacher	Designation	Qualification
1	Prof. Vandana Sharma	Professor	M.A., M.Phil., Ph.D.
2	Dr. R.K. Bansal	Associate Professor	M.A., M.Phil., Ph.D.
3	Dr. Ibadat Khan	Assistant Professor	M.A., UGC-NET, Ph.D.
4	Ms. Simranjeet Kaur	Assistant Professor	M.Sc., UGC-NET, Ph.D.(pursuing)
5	Dr. Dharna Sharma	Assistant Professor	M.Sc., Ph.D.
6	Dr.(Mrs.) Ravneet Kaur	Assistant Professor	M.Sc., M.Phil., Ph.D., Diploma in HIV Counselling, Maulana Azad Fellowship Awardee
7	Ms. Priyanka	Assistant Professor	M.A., Diploma in Mass & Communication
8	Ms. Tanupreet Singh	Assistant Professor	M.A.(Gold Medalist), Diploma in Counselling Psychology (Gold Medalist)

Activities during 2020-2021

Crafting Thoughts To Revitalize Self: A Psychological Transition

An online interactive session on "**Crafting Thoughts To Revitalize Self: A Psychological Transition**" was held on 18th July, 2020 under the "Online Interactive series" on the theme "Fostering Mental and Emotional Health During COVID-19" by the Department of Psychology, Akal University. There were more than 250 participants from various universities and institutions from India and abroad..



In the beginning of the event, Prof. Vandana Sharma crafted the base of the session by laying an emphasis upon the importance of channelizing our available sources of energy in positive ways so that we can become capable and competent to deal with the challenging situations.

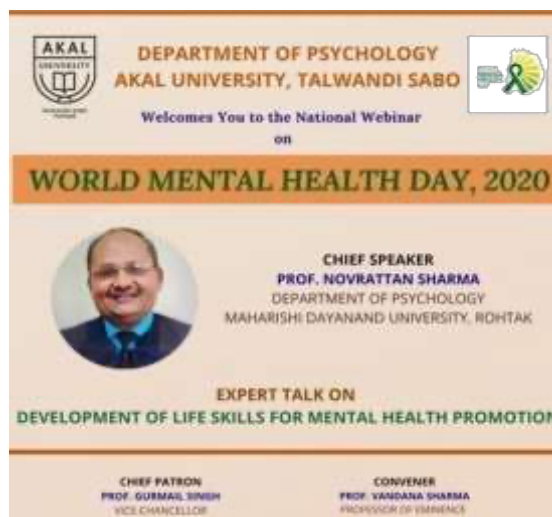
Then she welcomed all the panelists and inaugurated the webinar after introducing Dr. Chandrani Sen as the speaker to the audience. The speaker conveyed her concern by emphasizing on a new normal scenario where home becomes a work station. She talked about a new concern and also how we can revisit and redesign ourselves for this changed perspective. The main focus of Dr. Chandrani's talk was that people

should rebalance where they can really fit with this changed perspective and gather the more resurgence of energy to give their best to their respective workstations. She also mentioned myriad number of challenges faced during this period such as: perceptual challenges (physical distancing with the outer world, physical proximity with inner zone), worrisome feelings (isolation, time management, effects of stagnation on career progression) and uncertain future. She made a conclusion by throwing light on the importance of practicing health related behaviors such as yoga, shake therapy and relaxation techniques to stay fit in this pandemic.

National Webinar On World Mental Health Day

On the occasion of World Mental Health Day, Department of Psychology organized one day National Webinar on *Development of Life-Skills for Mental Health Promotion* dated on 10th October, 2020. Department of Psychology has organized this event under the series of Fostering Mental and Emotional Health during COVID-19 as an Online Interactive Session (OIS) initiated by the Department to provide mental health awareness and skills to maintain well-being and positivity in life.

World Mental Health Day is observed on 10th October every year, with the overall objectives of raising awareness of mental health issues and mobilizing efforts in support of better mental health. The theme selected for 2020 is **Mental Health for All: Greater Investment, Greater Access**. People suffering from mental health related problems have been treated as outcasts and not considered healthy enough to be involved in our everyday activities for a long time now. Prof. Gurmail Singh, Vice-Chancellor of the University conveyed his inaugural blessings and shared his thoughts on mental health amid COVID-19. He also assured that webinar will enable audience to equip themselves to overcome mental health problems and live a healthy life. After this, Prof. Vandana Sharma, also wished all the success of the webinar and Introduced the chief speaker of the event. Prof. Novrattan Sharma, Department of Psychology, Maharishi Dayanand University, Rohtak, Haryana was invited as chief-speaker for the same. Prof. Sharma has vast experience of application areas of psychological research and academics related to mental health and life skills training. Elucidating the concept of mental health awareness, he emphasized the importance of essential life skills to deal with mental health problems especially during pandemic of COVID-19.



Online Essay Writing Competition

Essay writing promotes critical thinking whereby an individual reflects on an issue and reaches a conclusion. It pushes students to assess different arguments so that they can come up with stronger positions. Through critical thinking, students learn how to observe different perspectives and views. Keeping this perspective in mind, the Department of Psychology, Akal University, Talwandi Sabo, Bathinda organized an online essay writing competition on the occasion of the 75th Anniversary of India's Freedom – Azadi Ka Amrut Mahotsav from 17th to 22nd May 2021. The sub-themes were:

- Freedom Struggle & Freedom Fighters
- Changing Face of India
- Atmanirbar Bharat or Self-reliant India
- Ek bharat Shreshtha Bharat
- Towards True Freedom

Students were asked to write an essay on the theme "Azadi Ka Amrut Mahotsav." The word limit for the essay writing was 700-1000 words. It was a departmental-level competition. From the department, six students had participated in this essay writing competition. Here, the first Position goes to Ms. Kritika Khattar from BA 4th Semester, the second position goes to Ms. Diya Mittal from BA-2nd Semester and the third position is secured by Ms. Navneet Kaur from BA-2nd Semester of the Department of Psychology. The event was organized in an online mode. The students were given a time limit of four days to complete their writing. The primary aim of this competition was to inculcate the habit of reading and writing about the struggle and success of Indian freedom among the students. After the evaluation of the essays, the winners and participants were awarded e-certificates.

CENTRE FOR COMPETITIVE EXAMINATIONS

The Akal University has started General Studies papers for the undergraduate programmes. Under this structure General Studies papers are taught to the students of Sciences and Arts. The syllabus of the papers is framed according to UPSC's preliminary and mains examination's format. The objective is to prepare students for rigorous competitive scenario. This unique system of teaching general studies paper broadens up the students' perspectives. These papers are non-credit compulsory in nature. The course utilizes a variety of instructional methods, including class interaction, tutorials, study of classical texts, case method, role playing, problem solving, library work and discussions to enhance not only perceptions but also comprehension, writing and analytical skills of the students.

Experts are invited regularly to motivate students for various competitive examinations. The aim is to expose students to some of the best minds in the field and this experiential learning would add to their understanding of the competitive scenario.

The courses envisage a focus on logical reasoning, use of classical texts and the development of writing skills to analyse and present evidence, through tutorials and a mentor system. The course aims to prepare the students for competitive examinations and employment in civil services, government and the corporate sector. It intends to provide additional perspectives to comprehend the significant issues of the region, nation and the world today. Our endeavour is to mould the students into remarkable young men and women who are leaders in the field, they may choose to go into, and who will usher in change for a new, progressive tomorrow.

Faculty

Sr. No.	Name	Designation	Qualification
1	Dr. Bhawna Basar	Assistant Professor	M.A., UGC-NET, Ph.D. (Sociology)
2	Mr. Anurag Singh	Assistant Professor	B.Tech., UPSC (Civil Services Examination 2018.2019)
3	Dr. Tarunpreet Kaur	Assistant Professor	BDS, MPH, UPSC (Civil Services Examination 2016)

Activities during 2019-20

How To Be Motivated Throughout UPSC Preparations

A webinar was organized on the topic "**HOW TO BE MOTIVATED THROUGHOUT UPSC PREPARATIONS**" on September 16th, 2020 by Centre for Competitive Exam, Akal University, Talwandi Sabo. The speaker of the day was Ms. Namita Saran (Dy.S.P.,-UPPSC-2018 Batch). Nearly 95 students from Centre for Competitive Exam attended the webinar.

Mr. Anurag Kumar Singh, Assistant Professor (CCE) gave detailed introduction of the speaker and also gave an outlook of the topic in a very systematic way. He said that Ms. Namita Saran has achieved success by cracking UPPCS-2018 and selected as Deputy Superintendent of Police. She has cracked Bihar PCS, Bank PO, UPPCS (twice) even after marriage. Then Ms. Saran shared her difficulties and how she managed during preparations. She told that her father and family were main source of her inspiration and she maintained this motivation throughout her journey. She further added for the motivation of students that she has not stopped yet and her new goal is to clear UPSC also.

How To Manage Time During Upsc Preparation And Techniques To Face Interview

A webinar was organized on the topic **"How to manage time during UPSC preparation and techniques to face interview"** on September 25th, 2020 by Centre for Competitive Exam, Akal University, Talwandi Sabo. The speaker of the day was Ms. Priti Kharwar (DySP in UNPPSC 2018 exam). Nearly 59 students from Centre for Competitive Exam attended the webinar.

Mr. Anurag Kumar Singh, Assistant Professor (CCE) gave a detailed introduction of the speaker and also gave an outlook of the topic in a very systematic way. He said that Ms. Priti Kharwar, selected as Deputy Superintendent of Police in UPPSC 2018 exam, was very mediocre students from the starting. Then Ms. Priti explained importance of time management and setting priorities for UPSC aspirants. She told the students how she used to make daily, weekly and monthly targets alongwith timetable. This helped her in completing the syllabus in effective and systematic manner and played major role in her success. She also shared some tips for interview process and her personal experience about interview.

Insights Into The Preparation Of Civil Services

A webinar was organized on the topic **"INSIGHTS INTO THE PREPARATION OF CIVIL SERVICES"** on December 12th, 2020 by Centre for Competitive Exam, Akal University, Talwandi Sabo. The speaker of the day was Ms. Shivjeet Bharti, HCS (Haryana Civil Services) Officer. Nearly 85 students from Centre for Competitive Exam attended the webinar.

Mr. Anurag Kumar Singh, Assistant Professor (CCE) introduced the speaker and an outlook of the topic in a very systematic way. He said that Mr. Manav Singla has been selected as IPS Officer through CSE-2017 and is currently posted in West Bengal Cadre. Mr. Manav Singla discussed about importance of notes and notes making exercise for UPSC-CSE. He also described about note making art for prelims and main perspectives. He also shared his experiences about his journey from being UPSC aspirant to becoming IPS Officer. He also talked about IPS Academy and training of IPS probationers there.



**THE KALGIDHAR SOCIETY: BARU SAHIB
(AKAL UNIVERSITY TALWANDI SABO DAMDAMA SAHIB)
BALANCE SHEET AS AT 31st MARCH, 2020.**

Note: Notes on accounts annexed.

(President)

Extract from books of The Kalgidhar Society

Secretary
(Secretary)
The Kalgidhar Society

As per our report in Form No. 10B Annexed.
for K.N.Chandla & Co.
Chartered Accountants

FRN-001326N

M. No. 088343

Place: Shimla

Dated: 10th Feb, 2021

(Dinesh Kumar)
Partner

