



QUALITY ENHANCEMENT AND SUSTENANCE IN HIGHER EDUCATION

Editors

Dharam Buddhi

Rajesh Deorari

Bharti Ramola

Lakshmi Priya Vinjamuri

Abhishek Pathak

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Preface

The Uttaranchal University organized a one-day **NAAC Sponsored** State level Seminar on "**Quality Enhancement and Sustenance in Higher Education**" under the guidance of its Chairperson and Vice Chancellor, Prof. (Dr.) Dharam Buddhi and Director IQAC, Er. Rajesh Deorari on the 18th of November, 2022.

The volume contains the written versions of most of the contributions presented during one-day Seminar. The Seminar on the onset, paved a platform for discussing the core key parameters of **quality in education** to provide participants with the opportunity to get to know and compare with their own experience, the strategies and practices for the **promotion and measures of sustenance of quality in higher education in India.** The initiative is to address and transfer the knowledge to the Directors, Coordinators, Faculty members, Students, Trainers, Researchers, Experts, Executives, and Officers working in public bodies, universities, training organizations, educational institutions and research centres etc.

The Seminar has been a good opportunity for participants coming from different states and diverse domains to present and discuss topics in their respective area of expertise. The one-day Seminar was presented by Dr. Shyam Singh Inda, Assistant Adviser: NAAC, Bengaluru who delivered his talk on the "Revised Accreditation Framework in synchrony with the National Education Policy 2020", emphasized on NAAC accreditation which is essential for quality enhancement. Dr. Vinita Sahu, Assistant Adviser: NAAC, Bengaluru explained on "Data Validation, Verification process and significance of the Student Satisfaction Survey" for HEIs followed by an insightful session on the "Green Initiatives for Institutional Ranking" by Dr. Ashwani Luthra, Director IQAC, Guru Nanak Dev University, Amritsar. The concluding session was delivered by Prof. (Dr.) Dharam Buddhi, Chairperson IQAC & Vice Chancellor, Uttaranchal University on the "Expectations from the HEIs for Quality Enhancement and Sustenance".

We would like to thank all the **participants for their contribution** to the Seminar and these proceedings. Many thanks to the **Organizing committee members** for their support and hospitality. Our special thanks to our colleagues Mr. Nikhil Aggarwal, Mr. Aditya Chahar, Mr. Sudhir Jugran and other members of IQAC for their devoted assistance in the overall commencement of the Seminar. We also express our sincere thanks to Director IQAC, Er. Rajesh Deorari for his contribution in preparing the volume of proceedings.

It is our pleasant duty to acknowledge the financial support from the **National Assessment and Accreditation Council (NAAC), Bengaluru** and Uttaranchal University, Dehradun for conducting this Seminar.

The Editors

ABOUT THE UNIVERSITY

Uttaranchal University has been recognized by the UGC under sections 2(f) and 12 (B) of the UGC Act, 1956, and by other statutory bodies of the State and the Nation. The University has been accredited with the prestigious "A+ Grade" by the National Assessment and Accreditation Council (NAAC). Uttaranchal University has become the first university in the State of Uttarakhand to receive NAAC A+ Grade in the first cycle of Accreditation, thus creating a history.

This firmly positions the University among the top 5% HEIs of the nation. The university is undeterred in its mission to provide the best experience to all its students whether regional, national or international, through quality teaching, investing in research and innovation, and inculcating the essence of the Sanskrit Shloka in its students as below:







GOOD QUALITIES PUT THEIR FOOTPRINTS EVERYWHERE

Message from the Chancellor

"The three core goals of Uttaranchal University are primarily committed to student-centric teaching-learning, world-class research, innovation and humanistic social responsibility which are encapsulated in our firmness while steering the University in a new arena.

The Strategic Plan of the University prioritises measurable outcomes. We will adhere to the institute's ambitions while embracing change.

With the support of all the stakeholders, I also look forward to Uttaranchal University becoming an institution of excellence in the field of educational interface, research, and innovation to carve out the excellence of our students."

Jitender Joshi



Messages



Uttaranchal University is among the top 5% Universities of India with the prestigious NAAC A+ Accreditation. UU has successfully created unique systems for harboring a student-focused environment where learning unfolds through a strong academic structure, fundamental teaching methodologies, persistent research, innovation and a promise to usher in the best resources from all over the world. We are committed to nurture talent and provide the students and researchers with the best career opportunities. Our students are smart, collaborative, and entrepreneurial. We provide them with opportunities to develop a global mindset for a successful career. With a curriculum designed by industry and academic experts, we make our students industry-ready as soon as they step out of the university.

The hallmark of the UU education system is its pedagogy that imbibes holistic development in each and every learner to harness goodness factor with a positive mindset. Our most valuable stakeholders are the students whom we support by providing a horizon of avenues. We develop their inquisitive minds through careful mentoring, and help them on their professional journey through the virtue of a friend, philosopher and guide.



New Education Policy 2020 and 21st century is going to focus on skills and technology.

India has the highest population of youth in the world and is going to be a big resource for the economic growth of the country as well as the globe. The excellence, creativity and impact are the heart of the university's vision and strategy. Each day brings new challenges, but working together brings innovative solutions as a response to the challenges. Therefore, we inculcate skills, innovation and research ability that you need to succeed.

National Assessment and Accreditation Council (NAAC) has awarded the prestigious grade "A+" and Uttaranchal University has become a unique university in the state of Uttarakhand for the way we support our students on Curricular Aspects, Teaching- Learning Processes, Research & Innovations, Infrastructure, Governance and Best Practices. The University is committed to generate, disseminate, preserve the knowledge and to collaborate with other institutions to impart quality education.

As Vice-Chancellor, my ambition for Uttaranchal University is to be known as the most innovative, vibrant and exciting place to study and to achieve your dreams & expectations.

I welcome you as a part of Uttaranchal University and assure you a vibrant and enriching experience.

Dr. Satbir Sehgal- Vice President

Prof. Dharam Buddhi
- Vice Chancellor

Editors' Profile:



Prof. (Dr.) Buddhi, is an alumnus of IIT Delhi with a Ph.D. in energy systems and served as a professor at Devi Ahilya University in "Indore School of Energy and Environmental Studies". He has work experience as a Director (Technical), Chief Technical Advisor, and Head R&D. He has served as the Vice Chancellor of Suresh Gyan Vihar University, Jaipur, and was a member of the Program Advisory Committee for the Department of Science and Technology, Government of India.

He has supervised the theses of 20 Ph.D. scholars and 90+ M. Tech. students till date. Dr. Buddhi's articles have received an astounding 12,000+ citations. He has been featured in the top 2% of the scientists listed by Stanford University, USA. Dr. Buddhi served on the editorial board of the Elsevier International Journal for Energy Conversion and Management and as a reviewer for a number of internationally famous research journals in addition to being a member of various professional organizations.

Er. Rajesh Deorari, the Director of IQAC has over 15 years of industry experience across sectors such as paper manufacturing technology, BoPET film industry, thick MDF lamboards, and food industry and lent his expertise to a Green field commissioning project at District Dhar in Madhya Pradesh. He has a B.Tech. in Mechanical Engineering from the MJP Rohilkhand University, Bareilly, Uttar Pradesh (State Govt. University). He earned his Master's in Mechanical Engineering with a major in "Design and Production" from the College of Technology, G.B. Pant University, Pantnagar. Under his leadership, the IQAC is dealing with projects such as the ranking and accreditation framework for NAAC, NIRF, ARIIA, UNSDGs, UNEP, QCI and UNAI etc. At the IQAC, he is responsible for developing a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution.





Prof. (Dr.) Bharti Ramola, is working as a Professor in School of Applied and Life Sciences, Uttaranchal University. She has more than eighteen years of experience in teaching. A masters in Chemistry with Organic Chemistry as her specialization from HNB Garhwal University (A Central University) and Ph. D. from Uttarakhand Technical University.

She has been the Chairperson of Internal Complaint Committee (2016-2022) and Cultural and Event Committee Uttaranchal University since 2018. She is also the coordinator of UNAI, Uttaranchal University since March 2022. She has been a member of the organizing committee of various national and international conferences. She has a number of research papers, patents and copyrights to her credit.

Dr. Lakshmi Priya Vinjamuri, has a masters in Biotechnology from Central University of Hyderabad, School of Life Sciences, doctorate in molecular oncology from the National University of Singapore, a dual masters in constitutional & administrative law and international law from Osmania and Andhra University respectively, MBA in international business and general management, MA in English having three decades of experience in the academic and corporate sector as a technology and legal analyst.

Vice-President, Uttarakhand State for WICCI in 2022, Convenor, Policy & Advocacy for IWN Andhra Pradesh (2018-19), Life member, India Women Network Chapter of CII ISIL, IIPA, ICADR, IAWS, SASCV & CySI.

Recipient of "The Indo Global Excellence Award in Law 2017", "The Environment Protection & Development Award 2017", "World Achievers Award in Law & Social Justice 2017", "In. Sc. Research Excellence Award" 2020, Dynamic Leader Award, Avishkar Foundation, Pradhan Mantri Jan Kalyankari Yojana 2020.

Participated in over fifty international & national conferences in India & abroad as an invited delegate and speaker with over sixty publications in recognized UGC CARE, SCOPUS journals and law magazines.





Mr. Abhishek Kumar Pathak, is an Assistant Professor at Uttaranchal University in Dehradun in the Computing Sciences. Deep learning, IoT, Artificial Intelligence and .Net Framework is among his research interests. He has done his MCA from Uttarakhand Technical University. He has a combined industrial and educational experience of more than 10 years. He has a number of research papers that have been published in reputable international journals.

ABOUT THE IQAC

"Committed to achieve excellence together"

The UGC formed the NAAC (National Assessment and Accreditation Council) as an autonomous agency in September 1994 under Section XII (ccc) of its statute to oversee standards of higher educational institutions in India. Higher educational institutions have been receiving momentum for quality awareness from NAAC, with the goal of ongoing development. All higher education institutions (HEIs) are required to set up an Internal Quality Assurance Cell (IQAC) in order to sustain the momentum of quality repercussions, according to a policy decision issued by the UGC in the XI Plan and XII Plan.

The IQAC serves as a mentor for the institution planning, guiding, quality assurance (QA), and quality enhancement (QE) efforts. The IQAC joins the institution system and works to achieve the objectives of quality enhancement and sustainability since quality improvement is a continual activity. The university complies with the NAAC advice on quality standards.



VISION AND OBJECTIVES OF THE IQAC

Vision

By institutionalizing and internalizing all the actions performed with assistance from both inside and outside the higher education institutions, it would be possible to establish quality culture as the primary focus.

Objectives

- The main goal of IQAC is to create a mechanism for purposeful, consistent, and catalytic action to enhance the institution's academic and administrative performance.
- To encourage actions that will help institutions run better by internalizing a quality culture and institutionalizing best practices.

PROCEEDINGS OF THE NAAC SEMINAR HELD ON NOVEMBER 18, 2022

Convened by the Internal Quality Assurance Cell of Uttaranchal University

The University continuously attempts to meet the standards of quality in terms of its teaching-learning, research and administrative processes. This seminar was organized in collaboration with NAAC to get acquainted with the new framework of NAAC for quality enhancement by expert NAAC advisors so that the higher educational institutions can design novel and need-based policies which have aspects like creativity and utility, which will contribute to the welfare of society and the nation.

This is a small step towards educating the academic community about the overall strength based on quality standards. As we work to achieve excellence in education, it helps us recognize our weaknesses that need to be remedied, picture the opportunities that lie ahead of us, and become more aware of the threats and dangers that must be dealt with. We can accomplish our institutional goals and missions with solid leadership and teamwork. The NAAC has advised all HEIs and individual institutions to pursue accreditation in the current academic scenario.

The seminar's primary goal was to let everyone comprehend the revolutionary improvements in the accreditation process, assess the progress, and identify any deficiencies and restrictions so that they might be fixed.

It is a procedure to maintain and improve the standard of higher education. Through this updated NAAC framework, specific actions may be taken to raise the bar of instruction, research, administration, curriculum, and extracurricular activities to achieve excellence.

The seminar must have aided all stakeholders in comprehending how the updated framework is to improve. The essential components of the certification process are to make them more robust, objective, transparent, and scalable in addition to making the complete accreditation process ICT enabled.

Objectives of the Seminar:



To disseminate the revised NAAC Accreditation and Assessment framework among the decision makers of the Universities thus incorporating the core objectives of NEP 2020.



Implementation of Quality Management System (QMS) at various departmental levels.



Recommend measures for capacity building of faculty and supporting staff for improving the quality of higher education to sustenance.

Sub Themes:

- Evaluation procedure under the revised NAAC framework with institutional preparedness for NEP 2020.
- To deliberate upon the present scenario and challenges before higher education institutes in India.
- Promoting integration of ICT enabled tools in teaching-learning pedagogies.
- Reforms in student assessment.
- Outcome based assessment and evaluation.

Expected Outcomes:

- The participants shall be able to understand the gamut of quality education vis-a-vis NAAC Accreditation process.
- Specific understanding of the merits of accreditation.
- Safeguarding and upgrading educational standards to the international level.
- Building a culture of quality consciousness in the teaching-learning and other processes of HEIs, appreciating the need for attainment of benchmarked standards.
- Preparation of time bound framework for accreditation.

The Organizing Committee:

- Dr. Kartikey Gaur
 Deputy Registrar (P&G)
- Dr. Lakshmi Priya Vinjamuri Faculty- LCD
- Prof. (Dr.) Bharti Ramola Faculty- UIT
- Mr. Arun S. Thakur
 Senior Librarian- Central Library
- Mr. Sudhir Jugran
 Asst. Manager (IQAC)
- Paculty- UIPS

- **Dr. Mohsin Ikram** Faculty- SOA
- Mr. Abhishek Pathak
 Faculty- USCS
- **Dr. Deepti Sharma**Faculty- UIM
- Mr. Nikhil Aggarwal Faculty- UCHS
- Ms. Sharon Lal Faculty- SLA
- Mr. Aditya Chahar IQAC Executive

Resource Persons:

The chief guest for the event was Dr. R.K. Soni, (Advisor AICTE)

The retinue of the speakers included:

Dr. Shyam Singh Inda

Assistant Adviser, NAAC Bengaluru

- He holds a PhD, MHRM, PGDHRM, PGSDOM BA RUSSIAN with Honours in Economics.
- Has successfully cleared the UGC NET in HRM.
- Has been a faculty at leading universities.
- Has been associated with the Nationalized Bank and the Central Government as well.

Dr. Vinita Sahu

Assistant Adviser, NAAC Bengaluru

- She holds a doctorate in Chemistry.
- She has qualified various competitive exams including NET, GATE (AIR 229), SLET and CSIR-IRF (SRF).
- She has also received multiple awards for her contribution including, Best Science Research Award from MPCST (Madhya Pradesh Council of Science and Technology), Bhopal in Physical Sciences, Academic excellence certificate from Devi Ahilya University, Shakuntala Bhondave award by Devi Ahilyotasav Samiti.
- Her papers have gone on to be presented in the Young Scientist competitions organized by Indian Science Congress Association (ISCA), (Shillong, 2008) and Fourth Madhya Pradesh Science Congress (Indore, 2008) respectively.
- She has worked as an INSA fellow under Teacher's category at IISC Bangalore.
- Her research boasts of being published in internationally recognized journals such as American Chemical Society, Elsevier and Springer.
- She has served as a reviewer for the journals mentioned above, as well.

Prof. (Dr.) Ashwani Luthra

Director IQAC, Guru Nanak Dev University, Amritsar

- Faculty, Guru Ramdas School of Planning, Shri Guru Nanak Dev University, Amritsar.
- He oversees the IQAC in the university and coordinates the Centre for Sustainable Habitat established under the RUSA Programme of the Government of India, New Delhi.
- He has been active in academia and other areas of his interest for the past thirty- one years.
- His papers have been presented and published in many internationally acknowledged platforms.
- He has edited one book and written outstanding 184 research papers.
- He is actively involved with Institute of Urban Transport (India), New Delhi, and is closely connected to the Institute of Spatial Planning and Environment Research (ISPER), Panchkula.
- Under his guidance, 84 postgraduate/undergraduate students and six Ph.D. candidates have finished their theses and research projects. He now has six Ph.D. research scholars enrolled with him.
- He has served on several committees and is a fellow Member of the Institute of Town Planners India (ITPI), New Delhi.

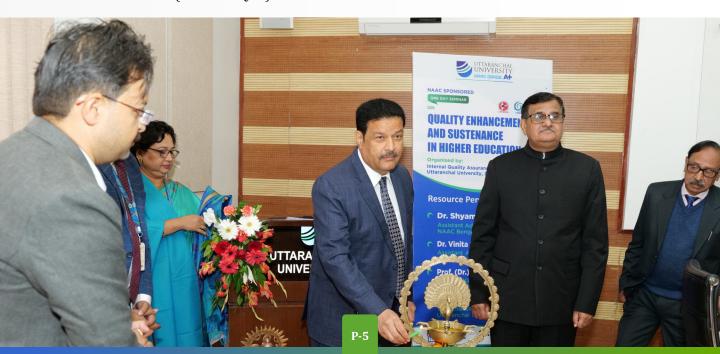
Prof. (Dr.) Dharam Buddhi

Vice Chancellor, Uttaranchal University, Dehradun

- He is an alumnus of IIT Delhi with a PhD in energy systems and served as an ex- professor at Devi Ahilya University in Indore School of Energy and Environmental Studies before being promoted to full professor in 2000.
- Additionally, Dr. Buddhi has work experience as a Director (Technical), Chief Technical Advisor, and Head R&D.
- He has been an international consultant to Asian Development Bank during 2016-2018 for the Green Power project in Sri Lanka.
- Dr. Buddhi has served as the Ex-Vice Chancellor, Suresh Gyan Vihar University, Jaipur.
- The project, titled "Thermal Energy Storage for Food/Grain Drying with CST/RE to Lower Pollution", which is a cooperation between India and Australia, and Dr. Buddhi serves as the project's Indian coordinator.
- He was a member of the Program Advisory Committee for the Department of Science and Technology, Government of India.
- Professor Buddhi had previously served as a Visiting Professor at Auckland University in New Zealand, Mie University in Japan, Kun Shan University in Tainan, Taiwan, and UPC Barcelona in Spain.
- Dr. Buddhi served on the editorial board of the Elsevier International Journal for Energy Conversion and Management and as a reviewer for a number of internationally famous research journals in addition to being a member of various professional organizations. He has supervised the theses of more than 90 M. Tech. students.
- Dr. Buddhi's articles have received an astounding 12,000+ citations. Dr. Buddhi's paper was
 placed first in the list of the top 10 publications in energy according to the Government of
 India's international Comparative Research Base (2009-2014) by DST report.

THE INAUGURAL FUNCTION

With an overwhelming participation of over 500 delegates from across the country joining the hybrid event, it was officially inaugurated by **Shri. Jitender Joshi** (Chancellor, Uttaranchal University), **Prof. (Dr.) Satbir Singh Sehgal** (Vice-President), **Prof. (Dr.) Dharam Buddhi** (Vice-Chancellor), **Prof. (Dr.) Rajesh Bahuguna** (Pro-Vice Chancellor), **Shri. S.C. Sharma** (Registrar), and **Er. R. Deorari** (Director IQAC) with his team.































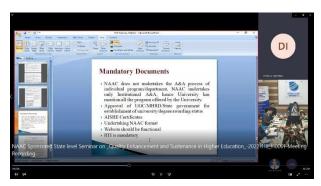
Deliberation of technical sessions in the Seminar:



Photograph 1: Dr. Lakshmi Priya Vinjamuri, Faculty-LCD

Session I by Dr. Shyam Singh Inda, Assistant Adviser: NAAC, Bengaluru

Dr. Shyam Singh Inda, Assistant Adviser: NAAC, Bengaluru, gave the first technical presentation of the seminar. He focused on the "Revised Accreditation Framework in synchrony with the National Education Policy 2020" and emphasized the importance of NAAC accreditation for maintaining and enhancing quality in HEIs.



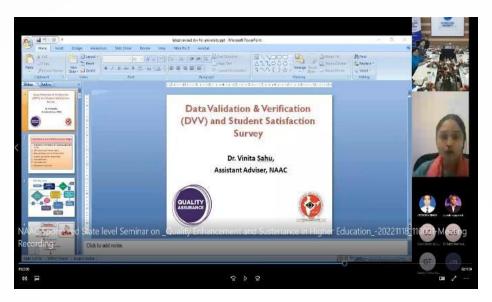
Photograph 2: Dr. Shyam Singh Inda, Assistant Adviser: NAAC, Bengaluru

Delivering Session on:

"Introduction to Revised Accreditation Framework & Overview"

Session II by Dr. Vinita Sahu, Assistant Adviser: NAAC, Bengaluru

Dr. Vinita Sahu, Assistant Adviser: NAAC, Bengaluru, presented the second technical session of the seminar with a discussion on "Data Validation and Verification Process and Importance of the Student Satisfaction Survey (SSS)" for HEIs.



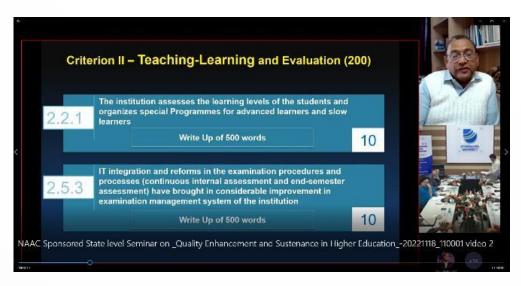
Photograph 3: Dr. Vinita Sahu, Assistant Adviser: NAAC, Bengaluru

Delivering Session on:

"Data Validation and Verification Process and significance of the Student Satisfaction Survey (SSS)"

Session III by Prof. (Dr.) Ashwani Luthra, Director IQAC, Guru Nanak Dev University, Amritsar

Prof. (Dr.) Ashwani Luthra, Director IQAC: Guru Nanak Dev University, Amritsar, presented the third technical session of the conference. He focused on the significance of "Green Initiative's & NAAC Ranking" in relation to HEIs.

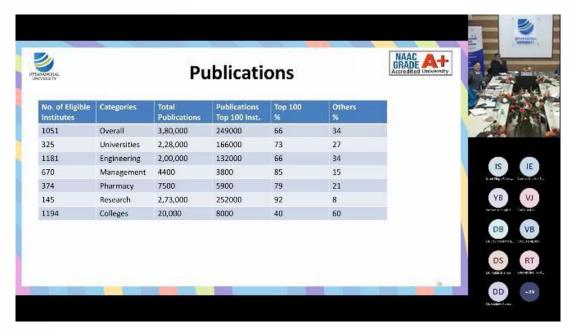


Photograph 4: Prof. (Dr.) Ashwani Luthra: GNDU, Amritsar

Delivering Session on: "Green Initiative's & NAAC Ranking"

Session IV by Prof. (Dr.) Dharam Buddhi, Chairperson IQAC; Vice Chancellor, Uttaranchal University

Prof. (Dr.) Dharam Buddhi, Vice Chancellor & Chairperson IQAC of the host University, spoke during the fourth technical session on "Expectations from the HEIs for Quality Enhancement and Sustenance."



Photograph 5: Prof. (Dr.) Dharam Buddhi: Vice Chancellor, Uttaranchal University

Delivering Session on:

"Expectations from the HEIs for Quality Enhancement and Sustenance"

Speeches for the day

Welcoming Speech

- In his opening remarks, Prof. Dharam Buddhi welcomed the dignitaries and gave them an overview of the session. He added that this is the first NAAC-funded workshop to take place in Uttarakhand. The overwhelming number of attendees at the lecture left him speechless.
- He was grateful for the opportunity that NAAC is providing to the nation to create empowered higher education institutions. He predicted that many Indian institutions will rank in various worldwide rankings in the future with the aid and direction of NAAC.
- He said that improving quality is an ongoing process for which we must put in daily effort. He pointed out that one sign of an HEI's success is students' satisfaction.
- He expressed gratitude to the keynote speaker for assisting Uttaranchal University in many ways.

Dr. R.K Soni's Address

- He praised Uttaranchal University for planning the workshop and obtaining permission for its
 online programmes. He predicted that numerous hybrid courses will become popular in the
 near future.
- He displayed NBA figures demonstrating how just 13.92% of the 63.4% of colleges that qualified for NBA accreditation, actually received it. He noted that several universities close every year as a result of poor quality. He commended UU for upholding the institution's standard of excellence. He said that the secret to sustainability is quality.
- According to the Chief Guest, Dr. R.K. Soni, Adviser AICTE; complete accreditation of
 institutions will be maintained in this inventive and dynamic time, and unaccredited HEIs may
 not be able to continue operating in the future.

Dr. Shyam Singh Inda's Speech

- Informed the congregation regarding the student satisfaction survey.
- Elaborated on the vision of NAAC which includes scheduling evaluation reviews on a regular basis, promoting teaching and learning of higher education while encouraging research and collaborative efforts with other higher education stakeholders to assess, market, and sustain excellence.

Dr. Vinita Sahu's Speech

- She gave a presentation on the Student Satisfaction Survey and Data Validation and Verification (DVV).
- Outlined how institutions calculate their CGPAs and how they are evaluated.
- Along with the aforementioned, she highlighted the timeline for each project and recommended that before applying for NAAC, all HEIs comprehend the handbook and SOPs.
- It was advised that institutions often monitor the NAAC Dashboard to ensure they don't miss any crucial notifications or information.
- She informed that the following things should be in order:
 - a) Understanding of metrics.
 - b) Data submission of both quantitative and qualitative metrics.
 - c) Upload the relevant documents.
 - d) Go through the NAAC manual and guidelines.
- Notified the gathering of the seven criteria that will form the foundation for evaluating HEIs.
- The DVV process for quantitative metrics was also described.

Dr. Ashwani Luthra's Speech

- Provided context for the policies by describing them in relation to criteria including teaching learning assessment, IT integration, learning outcomes & objectives, research facilities, and policies.
- He elaborated on the infrastructure for the scientific work involving various programmes for knowledge production and transfer, such as an Incubator, Institutional policy on consulting, and innovative problem-solving, responsibilities of institutions to society's infrastructure and learning resources.
- He informed the congregation about the e-content development facilities including lecture capture systems, audio-visual and media centres.

- Along with the aforementioned he also reiterated that gender equality, prudent energy and energy management practices, and on-site water conservation facilities are among the institution's core values and best practices.
- He expressed faith in sensitizing students and staff at the institution to their constitutional duties as citizens, including their beliefs, commitments, and responsibilities.
- He concluded his speech by giving the dignitaries a campus tour of Guru Nanak Dev University.

Dr. Dharam Buddhi's Speech

- He deliberated that the future depends on talents and skills, which include those of the faculty, society, and each individual.
- He enumerated the role of HEIs which includes fostering curiosity among students and the general public.
- Along with it, he also mentioned that the purpose of higher education institutions is to teach students how to think and learn, so that their brain power grows to benefit society.
- One of the roles of the HEIs is to provide an environment that is focused on teaching the students the power of collaborative efforts.
- Provided with information on the HI index, publications by prominent Indian academic institutions showcasing their research papers and their function in obtaining ranks.
- Highlighted the benefits of choice-based credit systems.
- It was also suggested that all HEIs should include these seven criteria in their curricula- Core Courses, Ability Enhancement Compulsory Courses, Skill Enhancement Elective Courses, Electives- Discipline specific and generic.

Report of Valedictory Function

Mr. Sudhir Jugran, Mr. Aditya Chahar, Mr. Nikhil Aggarwal and other IQAC members planned the event. Er. Rajesh Deorari, Director, IQAC, delivered the formal vote of thanks.

Feedback

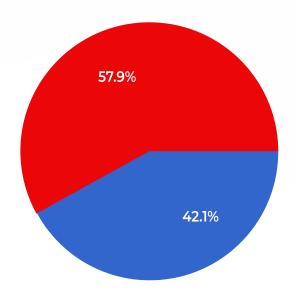
As the event progressed, we solicited feedback from our 575 attendees from 25+ States. The comments generally applauded the host university's efforts. The idea of organizing the event offline was also put forth. One of the recommendations was to schedule the event on a regular basis, another suggested that the event should be multilingual to spread the word farther. It was also recommended to host one-on-one meetings to enhance the understanding of the participants.



The ratio of the participants is reflected in the charts below:

Registration Type:

575 responses

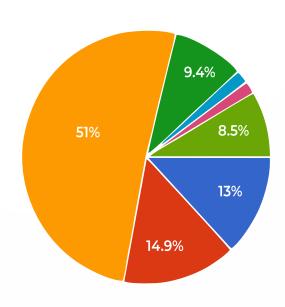


- Uttaranchal University
- Other than Uttaranchal University

Profession:



- Associate Professor
- Assistant Professor
- Administrator
- Scientist
- Researcher
- Scholar
- Others



Event conclusion and a vote of thanks:

The IQAC Criteria Heads of Uttaranchal University, Prof. (Dr.) Bharti Ramola, Dr. Lakshmi Priya Vinjamuri, and Mr. Abhishek Pathak, served as the event's comperes. Mr. Sudhir Jugran, Mr. Aditya Chahar, Mr. Nikhil Aggarwal and other IQAC members planned the event. Er. Rajesh Deorari, Director of IQAC, gave the official vote of thanks on this occasion. In his vote of thanks, he extended his gratitude towards the administration of the university and remained assertive about the positive impact of the event held.



Reflection in Media:

Seminar on 'Quality Enhancement & Sustenance in Higher Education' held at Uttaranchal University

By OUR STAFF REPORTER DEHRADUN 18 Nov: Untersechal University organised a one-day NAAC sponsered state level seminar on Quality Enhancement & Sustemance or Higher Education under the acquisit of internal Quality Assurance Cell (QAC), under the guidance of in Charperson and Vice-Charcellor. Prof. (De) Distract Buddhi and Discusse IQAC. Er Raseh December IQAC.

lighting of the lamp by Jitender Joshi, Chanceller, Ultrarandial University Vos-President Prof (Dr) Sather Singh Sebgel. Chancellor Prot (Dr.) Dhare Buildhi, Pro-Vice Charcellor, Prot. (Dr.) Rajosh Bahaguna, Rogistrai SC Sharma, and Director (IQAC) Er Rajesh Decram with whelming participation of quer 500 delegates from across the nation joining the hybrid event witnessed the stupendous and maightful address by the Chief Guest e day, Dr RK Soni, Adviser, AICTE on the essence of quality nhancement and sustenance in igher education in India. Dr Soni



stated that comprehensive occreditation of institutions will sentant in this dynamic & showship era and the non-accredited FEIs may not be able to survive to the future.

The technical sessions of the one-day sentiral were presented by Dr Shyum Singh Inda, Assistant Advisor NAAC, who delivered his talk on the Revised Accreditation, Framework in synchrony with the National Education Policy 2020 emphasized on NAAC accreditation which is essential for quality enhancement. Dr. Vinita Sahu, Assistant Adviser: NAAC explained on Data Validation and Verification process and significance of the tradent patification survey for HEIa. followed by an anaphthal session on the green initiatives for institutional ranking by Dr. Ashwant Luthra, Deactor IQAC, Guru Nanak Dev University, Armitian. The concluding session was delivered by Prof (Dr.) Dharam Buddlis, Champerson IQAC. & Vice: Chameellor, Ultiarenchal University on the Expectations from the HEIs for quality enhancement.

and sustaneous

The event was compared by Prof On Bhank Ramela. Dr Lilebras Parael. Dr Lilebras Portal. IQAC Craesia Heads of Utananchai University. The event was organized by Nikhii Agganwal. Aditya Chahar. Sudhir Augan and other members of IQAC. The Vote of thanks was delivated by Raiseh Deorais.

Important Slides from the Power Points presented.

By Dr. Shyam Singh Inda, Assistant Adviser: NAAC, Bengaluru

Delivered Session on:
"Introduction to Revised Accreditation Framework & Overview"

NAAC Revised Accreditation Framework: University



18/11/2022

Outlines

- NAAC Vision Mission
- Highlights of Overall Process
- Assessment Framework of NAAC
- QIF Components Highlights
- Registration and IIQA

NAAC Vision

• To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives

NAAC Mission

- To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;
- To stimulate the academic environment for promotion of quality of teaching-learning and research in higher education institutions;
- To encourage self-evaluation, accountability autonomy and innovations in higher education;
- ▶ To undertake quality-related research studies, consultancy and training programmes, and
- To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance

NAAC A&A Process

- Eligibility
- Assessment and Accreditation (A&A) by NAAC is available to institutions after either six years of operation or two batches of graduates.
- Data, Documents, information,
- Guidelines, manuals, SOPs, Templates

Assessment Framework of NAAC

- Criterion, Key Indicator, Metrics
- Data Driven
- Quantitative (about 68.68%) and Qualitative peer judgment (about 31.35%)
- Validated by third party and peers
- Completely automated
- Communication is system driven
- Follow fixed timeline
- Online survey of students and designated user portals

IIQA Application Process HEIs may submit online application of IIQA round the year with effect from 1st June 2018 Application * Fees Affiliation / HEI HEI **Payment Basic SRA** Academic **Document** Institution (29,500 Compliance **Data Inputs Verification** Eligibility nonrefunda ble Accepted In case of rejection of IIQA application, HEI may resubmit Supported by **IIQA** applications for Resubmit uploading essential maximum of three attempts SSR IIQA documents without IIQA fees, including **Application**

Mandatory Documents

NAAC does not undertake the A&A process of individual program/department, NAAC undertakes only Institutional A&A, hence University has mentioned all the programs offered.

the rejection attempt within the period of a year

- Approval of UGC/MHRD/State government for establishment of university/degree awarding status
- AISHE Certificates
- Undertaking NAAC format
- Website should be functional
- ▶ RTI is mandatory

By Dr. Vinita Sahu, Assistant Adviser: NAAC, Bengaluru

Delivered Session on:

"Data Validation and Verification Process and significance of the Student Satisfaction Survey (SSS)"

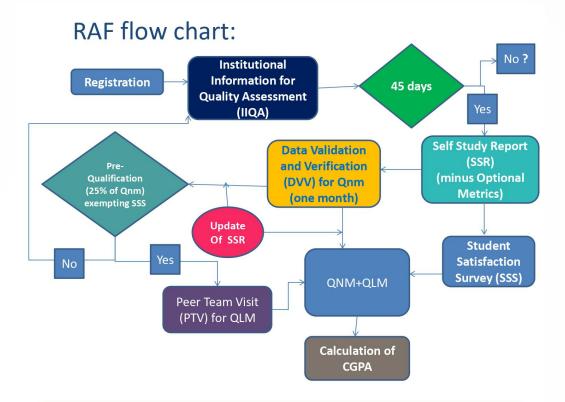
Data Validation & Verification (DVV)





Assessment & Accreditation process: Stages

- Institution information for quality assessment (IIQA)
- 2. SSR submission (metric data)
- 3. Data validation and verification DVV
- 4. Student Satisfaction Survey (SSS)
- 5. Prequalification
- 6. Peer team Visit
- 7. Assessment outcome



DVV & SSR SUBMISSION READINESS

- Understanding of metrics
- Data submission both Quantitative and Qualitative metrics
- Upload of relevant documents
- Go through NAAC manual and guidelines
- Refer Standard operating procedure (SOP) helpful in SSR submission and DVV clarification

The seven Criteria to serve as basis for assessment of HEIs are

- I. Curricular Aspects
- 2. Teaching-Learning and Evaluation
- 3. Research, Innovations and Extension
- 4. Infrastructure and Learning Resources
- 5. Student Support and Progression
- Governance, Leadership and Management
- 7. Institutional Values and Best Practices

Data Validation and Verification

Why Validation?

Need of Validation:

- To obtain consistent, reliable and accurate data
- Act as a proof in decision making
- To get assurance of Quality product



Data Validation & Verification (DVV)

- Helps NAAC ensure correctness of the data captured during the SSR process.
- Identified external agencies to partner validate the claims made by an institution.
- Data sheets for various metrics NAAC
- AISHE, Mandatory disclosure website, UGC, MHRD, Universities,
 State Higher Education Departments, other Regulatory agencies.
- Annual reports, Audited Statements of Accounts, Research Scopus, Web of Science, INFLIBNET.
- No on-site visit for validation.
- · More amenable to the use of technology data mining and analytics



Data Validation & Verification (DVV)

- Data Templates to be correctly filled
- HEI website to be functional
- Fill the response within 15 days of clarification period
- Data not be hosted on Google or any drive
- No password
- If the data is more than 5 MB institutions can host it on their website and share the link
- Refer Standard operating procedure (SOP) helpful in SSR submission and DVV clarification
- http://www.naac.gov.in/images/docs/apply_online/SOP-DVV-HEI/SOP-for-HEIs-Revised-Affiliated-HEIs-13.02.2020.pdf

Student satisfaction survey

Metric		Weighta	
No.		ge	
2.7.1.	Online student satisfaction survey regarding teaching learning	50	
Q_nM	process		
	Data Requirement: (As per Data Template in Section B)		
	Name/Class/Gender		
	Student Id Number/Adhar Id number		
	Mobile number		
	Email Id		
	Degree Programme		
	(Database of all currently enrolled students need to be prepared and shared with NAAC along with the online submission of QIF)		
	File Description:		
	Upload any additional information		
	Upload database of all currently enrolled students (Data		
	Template)		

Student Satisfaction Survey (SSS)

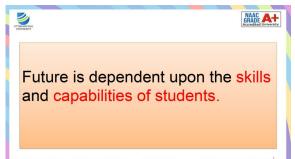
- ✓ Institutions have to submit the database of minimum 50% of its students.
- SSR cannot be uploaded unless SSS database is submitted.
- √The SSS questionnaire is mailed to all students.
- Responses should be received from at least 10% of the student population or 100.
- ✓ If the response rate is lower than the limits, the metric is not taken up for evaluation.
- SSS happens simultaneously with DVV process.

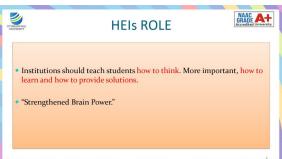
By Prof. (Dr.) Dharam Buddhi, Chairperson IQAC; Vice Chancellor, Uttaranchal University

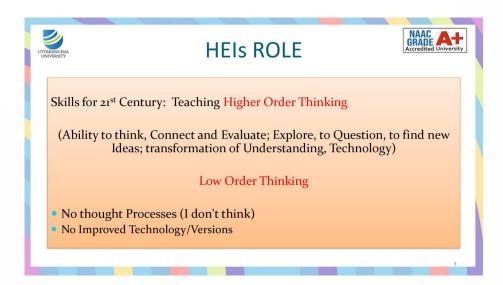
Delivered Session on:

"Expectations from the HEIs for Quality Enhancement and Sustenance"











THOUGHT PROCESS



- Before Thinking Get Ready, Identify a plan
- During Thinking Use Goals and Standards
- After Thinking Reflect Review and evaluate



Ecosystem



Educational ecosystems should be oriented towards developing the student's abilities to work in collaboration to enhance adaptability to rapidly changing environments. The process of transferring should be knowledge centric.



Fundamental Principles of High-Education Ecosystem

- Overall connection between the educational ecosystem and the social system
- Principles of Ecological Process: Cultural, integrity, adaptability
- Combination of education and morality
- Constructing an open platform for innovation



Efficacy



Collaborative teacher efficacy' (the skills and knowledge of the whole group rather than the individual teacher) as critically important to student outcomes

A good gardener understands the ecosystem that makes the garden flourish: Leader

Respect those parts of the system that nurture the education system as a whole and contribute to its flourishing: Teacher



University



- Knowledge Creation
- Knowledge Dissemination

"Vishwaguru"



Stake Holders



- Students
- Teachers
- Parents
- Society
- Industry
- Management
- Technology





Towards an enabling ecosystem for 'Globalization'

UTTARANCH

H Index and Citations Report



S.No.	Institute	Faculty Members	Total Papers	Papers average per year in last 5 years	H Index	Total citations	5 years citations
1	IISc Bangalore	502	57368	3000	103	172565	149748
2	IIT Delhi	550	39454	2600	115	187609	148732
3	IIT Roorkee	450	25494	2000	178	273928	184571
4	IIT Kanpur	450	30221	1800	114	262254	155508

12



Top 10 NIRF institutions



Category	Ph D (%)	No. of Average Faculty
Overall	77	596
University	72	645
Engineering	78	330
Management	89	45
Pharmacy	68	33
Colleges	59	172

UTTARANCHAL

Publications



No. of Eligible Institutes	Categories	Total Publications	Publications (Top 100 Inst.)	Top 100 %	Others %
1051	Overall	3,80,000	249000	66	34
325	Universities	2,28,000	166000	73	27
1181	Engineering	2,00,000	132000	66	34
670	Management	4400	3800	85	15
374	Pharmacy	7500	5900	79	21
145	Research	2,73,000	252000	92	8
1194	Colleges	20,000	8000	40	60

ITTARANCHAI UNIVERSITY



Share of Publications from top 100 Institutions

Institute Category	% Share
IITs	36
NITs	19
State Public Universities	8
State Private Universities	3
Deemed Universities	23
Colleges	5

ITTARANCHAI UNIVERSITY

(CURRICULUM DESIGN & DEVELOPMENT)



Curriculum Design and Development

Curricular Planning and Implementation

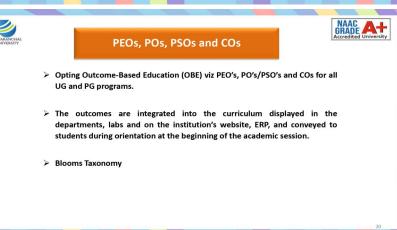
Academic Flexibility

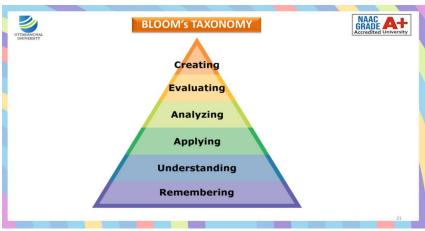
Curriculum Enrichment

eedback System

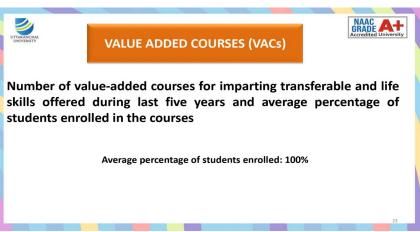
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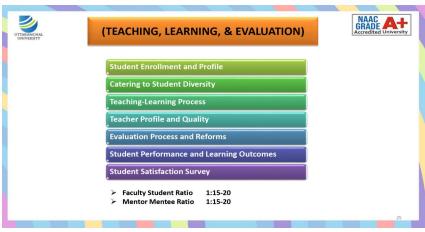


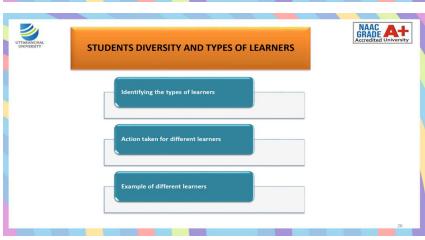






















RESEARCH PUBLICATIONS



- Total no. of publications
- Highest Impact Factor
- Average Impact Factor
- H Index
- Citations Per Paper
- Book Chapters

31





Institutional Social Responsibility

32

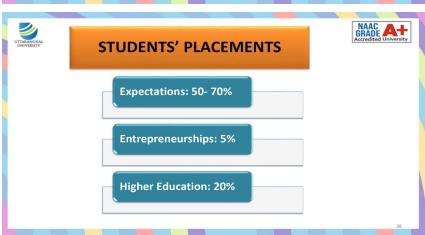












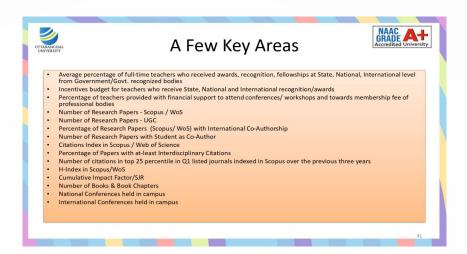






Country and Approximate Number of Patents

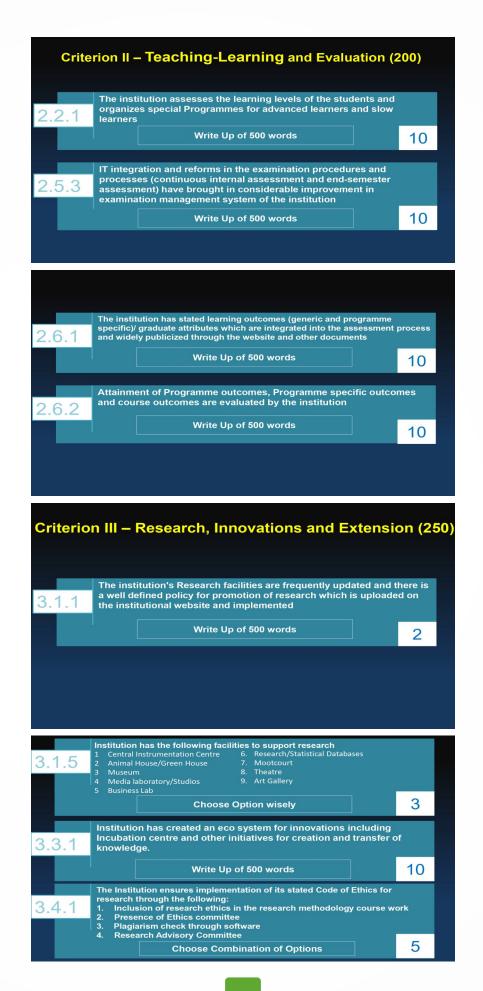
- China 695,400
- United States 595,700
- Japan 502,600
- South Korea 206,780
- Germany 173,220
- France 72,800
- United Kingdom 58,410
- Switzerland 53,860
- Sweden 44,530
- Netherlands 41,270
- India 60,000

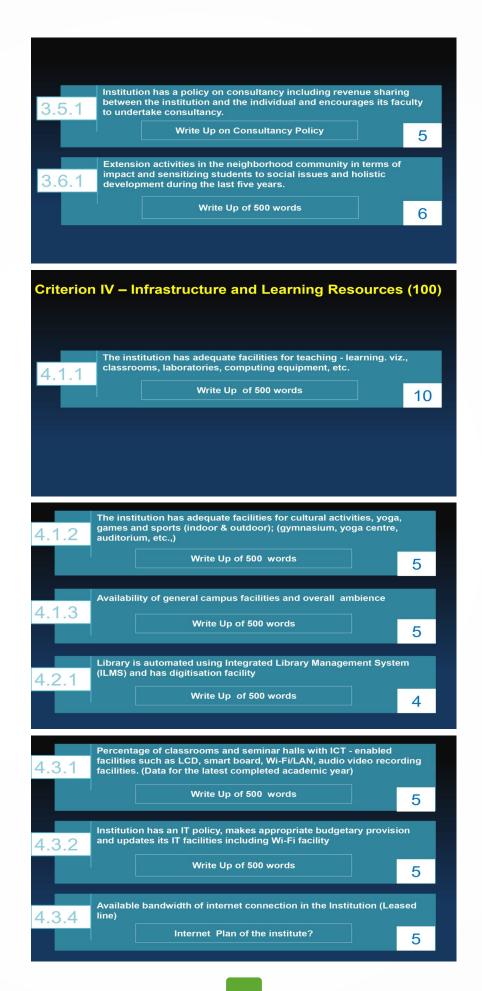


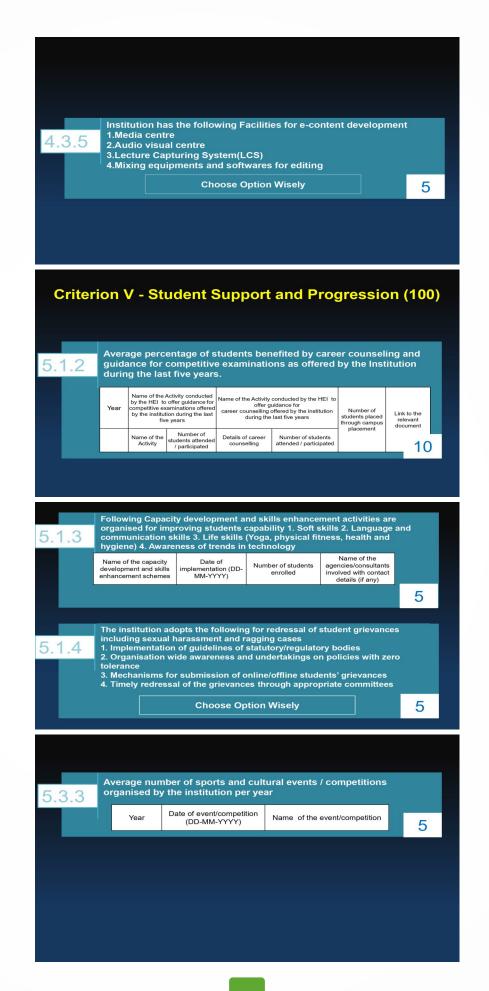
By Prof. (Dr.) Ashwani Luthra, Director IQAC, Guru Nanak Dev University, Amritsar

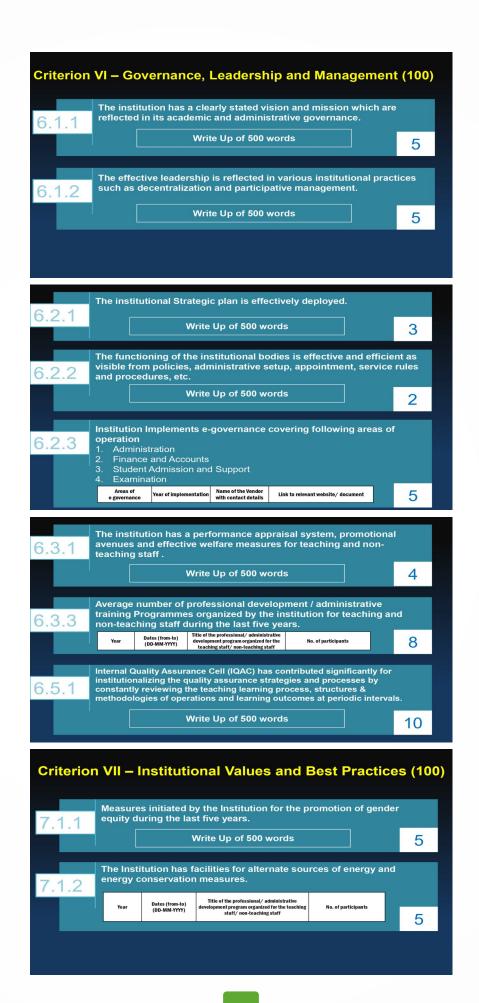
Delivered Session on: "Green Initiative's & NAAC Ranking"



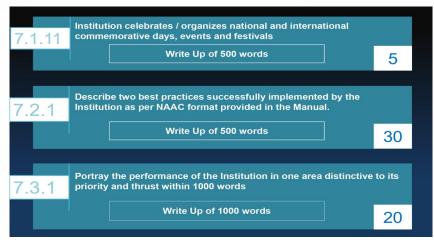














Guru Nanak Dev University Amritsar Green Campus Initiatives

Second most cleanest Government University of India

- Establishment Area Constructed Area
- Student Strength
- Nov. 14, 1969 202 Hectare
- 13.14 hect. 12000 approx.
- Green spaces and rich tree cover Green mobility & walkability E-power (solar)
- Water management and reuse
- Zero waste
- Green buildings
- Public participation

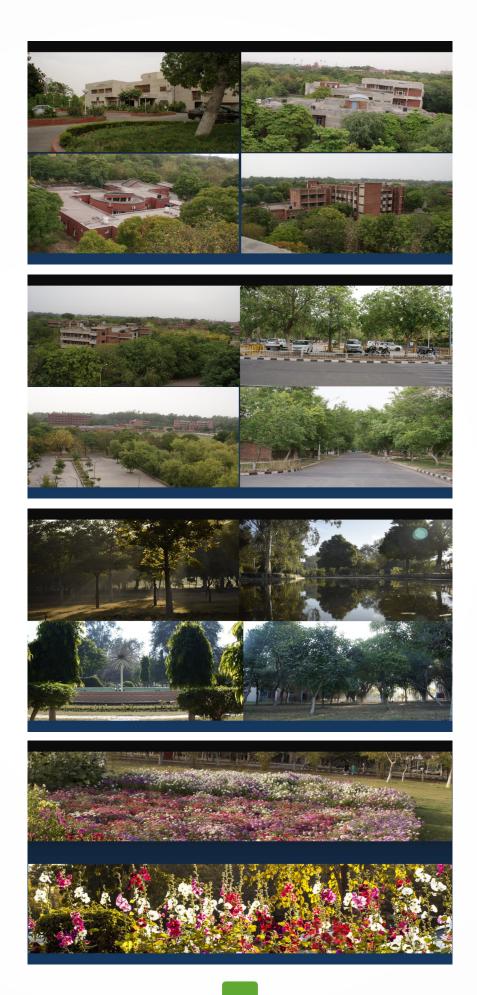
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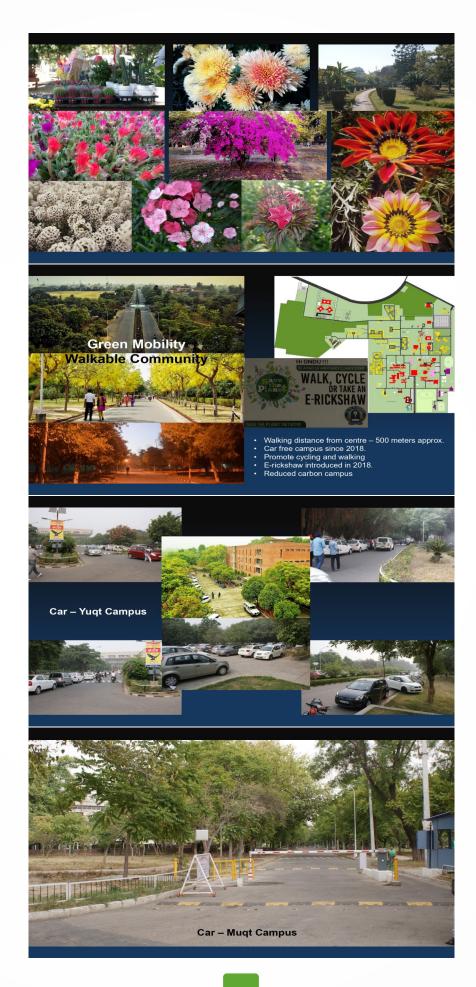




dscaping and Tree Cover

- Nearly 50000 trees
- Botanical Garden (10 Hect.)
- 500 species
 - Trees
- Shrubs
- Cactus
- Flower beds
- · Green lawns

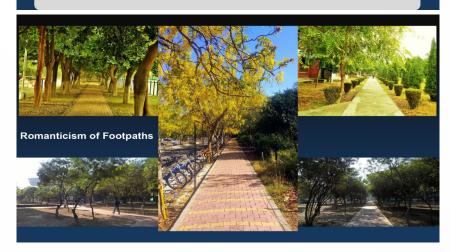
















E-power (Solar)

- 1.48 MW grid connected rooftop solar photovoltaic power plant sanctioned by Solar Energy Corpn. India Under Jawahalal Nehru National Solar Mission.
- On 23 buildings of GNDU.
 Reduce CO₂ (1 MW reduces 730 tons CO₂).



Plant No.	Building Name	Capacity (KW)	Current Work Status		
			Mechanical Installation	Electrical	
	Bhai Gurdas Library	100.1	90%		
	Bhai Gurdas Library	100.1	90%		
	Department Of Mathematics	25.025	100%	50%	
4	New Lecture Theatre Complex	50.05	100%	50%	
	Guru Nanak Bhawan	100.1	100%	100%	
6	Department Of Chemistry	50.05	100%	100%	
	Department Of Chemistry	25.025	100 /8		
8	University Business School	25.025	100%		
	Electronics Technology Deptt.	100.1	100%	100%	
10	Electronics Technology Deptt.	20.15	100%		
11	Department Of Education	40.3	80%	50%	
12	Department Of Physic	50.5			
13	Administrative Block	100.1	100%	50%	
14	Departt. Of food science and Technology	49.725	100%	30%	
15	Department Of Zoology	49.725	80%	30%	
16	Dept. Of Botanical &Env.scs.	49.725	100%	30%	
17	Girls Hostel	64.675	100%	100%	
18	Department of Economics & Diptt of Sociology	64.675	100%		
19	School of Social scieces	50.5	100%	100%	
20	Department of Planning & Architecture	100.1	100%	100%	
21	Department of physical Education /deptt.of sports Physiotherapy	50.5	100%	100%	
22	University Business School	70.2	100%	100%	
23	Boys Hostel No-03	25.025	100%	50%	
24	Zorawar Singh Hostel	45.175	100%	100%	
25	Near HRD Center	49.725	80%		
26	Department of Physiotherapy	25.025	100%	100%	
	Total	1481.4			

Water Management and Reuse



Separate storm water and sewerage networks.

Water Recharge

 188.86 hact. - organized lawns or agricultural lands natural recharge wells.

Rainwater Harvesting

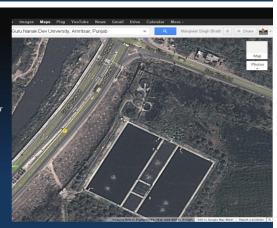
- 87270 sq. mts. roof top area and surface run off along the roads.
- Levels of roads lower than the lawns increased run off due to overflow.
- 2 RWH tanks in botanical garden and in its north-western direction.
- Surplus water of the tank is disposed of in the Nallah.

Water Reuse after Treatment Own sewerage treatment plant

Treated water used witin

Sewerage Treatment Plant

- Capacity 2500 KL/day
- Cost: 38 lakh in year 2008
- Area: approx. 2 acres
- Reuse 2500 KL treated water for irrigating the botanical garden.



Zero Waste Campus (Segregation and Vermicomposting)

Dry Waste

- On campus segregated SWM.
- Solid waste produced 2 quintals/day
- 60% segregated (paper/plastic/steel etc.)
- 40% disposed off at city dump.

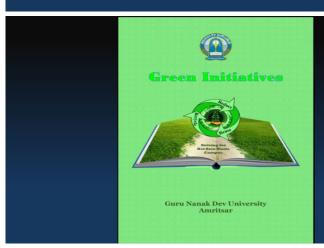
Wet Waste (Hostels, Canteens and Residential)

- 550 kg. per day
- 70% sold for dairy business
- 30% used for vermicomposting
- Installing biogas plant shortly

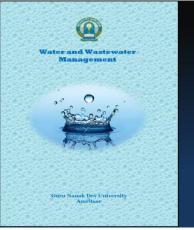


Public Participation (Awareness Campaigns)

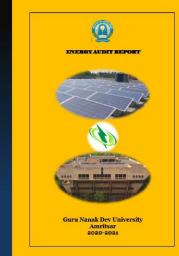
- Campus committee (members campus residents the members)
- Landscape committee (members campus residents and technical persons)
- Waste management committee (members campus residents and technical persons)
- Go green club (members campus students mentored by teacher incharge)
- Social service club (members campus students mentored by teacher incharge)

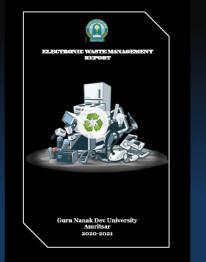




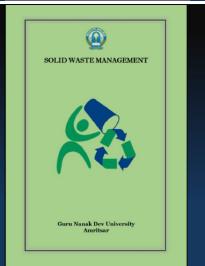


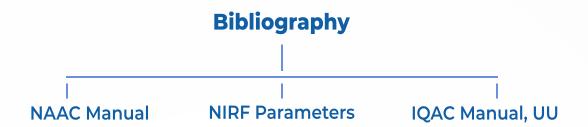












Acknowledgements

Writing a book is never a solitary endeavour, and this one is no exception. There are so many people to thank, and I hope to do justice to all of them here.

This endeavour would not have been possible without the immense contribution of the **National Assessment & Accreditation Council (NAAC)**, **Bengaluru** for their unwavering support in considering and extending the sponsored financial support and anticipate receiving and expedite much more in years to come, the tireless efforts of the IQAC Committee members and the editors. Firstly, we would like to express our gratitude to **Shri Jitender Joshi, Chancellor**, Uttaranchal University who has been a constant source of support, encouragement, and inspiration throughout the writing process.

I would like to thank **Dr. R. K. Soni,** AICTE Adviser, **Dr. Shyam Singh Inda**, NAAC Assistant Adviser, **Dr. Vinita Sahu**, NAAC Assistant Adviser, and **Dr. Ashwani Luthra**, Director IQAC, **Guru Nanak Dev University**, **Amritsar** for their insightful sessions.

Editors have been an invaluable collaborators and guides, helping me to shape and refine ideas and words. Their insightful feedback and editorial expertise have been essential in bringing these proceedings to life.

I would like to thank all the registered **participants** and **attendees** for their contribution to the Seminar and these proceedings. Many thanks to the other **Organizing Committee** members of **IQAC** for their support and hospitality in the overall commencement of the Seminar.

Uttaranchal University extends its heartfelt gratitude to all the people involved in the organization of the seminar and seeing it to fruition.

The love and encouragement by my near and dear ones have sustained through the ups and downs of writing.

Finally, I would like to express my deepest gratitude to my readers. Without you, these proceedings would be nothing more than words on a page.

Thank you all sincerely.

Director, IQAC

Er. Rajesh Deorari

Date: 28 March, 2023







राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

The Executive Committee of the National Assessment and Accreditation Council is pleased to declare the Uttaranchal University Chandanwari, Premnagar, Dehradun, Uttarakhand as Accredited with CSPA of 3.30 on four point scale at A+ grade valid up to January 10, 2027

Date: January 11, 2022









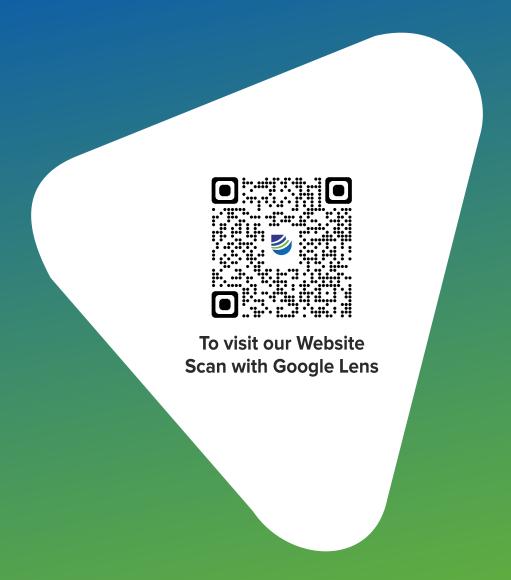


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Uttaranchal University

Arcadia Grant, Premnagar, Dehradun - 248007, Uttarakhand Toll Free: 1800 212 4201, 1800 212 4221 Website: www.uudoon.in