



Opening Note Editor in Chief

Dear Readers,

Welcome to the inaugural issue of Higher Education Matters, a monthly magazine dedicated to the intricate and ever-evolving landscape of higher education and in Kerala. As we embark on this journey, our mission is to become the leading source of insightful analysis, comprehensive reporting, and thought-provoking articles by experts on all matters related to higher education within our borders.

We believe that higher education is the bedrock upon which the future of our society is built. It is where ideas are cultivated, skills are honed, and leaders are made. The policies and decisions that shape our higher education system have farreaching implications, influencing not just the lives of students and educators, but also the economic and cultural vitality of our State.

In each issue, we pledge to bring you indepth articles that dissect the latest developments in higher education policy, from legislative changes and funding allocations to curriculum innovations and technological advancements. Our team consists mainly the expert contributors providing balanced perspectives, ensuring that every story we tell is grounded in facts and enriched by diverse viewpoints. Higher Education Matters aims to be more than just a magazine, aspire to be a platform for dialogue and engagement. We will feature interviews with policymakers, educators, and students, giving voice to those at the forefront of higher education. Additionally, our opinion pieces will offer a space for vigorous debate, encouraging readers to engage with the pressing issues that shape our educational landscape. The path forward for higher education is fraught with challenges, from budget constraints and policy shifts to the everchanging demands of the job market. Higher Education Matters is here to help our readers navigate these complexities, offering strategic insights and practical solutions to the problems facing our higher education system.

As we launch this first issue, we invite you to join us on this exciting journey. We are committed to providing you with the highest quality content, and we value your feedback and engagement. Together, we can build a brighter future with quality change for higher education in our state.

> Warm regards, Editor in Chief





Publisher: Kerala State Higher Education Council

Editor in Chief: Rajan Gurukkal Vice Chairman Kerala State Higher Education Council

Managing Editor: Rajan Varughese Member Secretary Kerala State Higher Education Council

Executive Editor: Manulal P. Ram

Editor: Deepika Lakshman

Address: Higher Education Matters, Kerala State Higher Education Council, Science and Technology Museum Campus, Vikas Bhavan P.O., Thiruvananthapuram-695033, Kerala State, India

Advertising & Sales Enquiries: contact.hematters@gmail.com Customer Enquiries: contact.hematters@gmail.com

Design & Lay Out: Kerala State Higher Education Council Cover Photo & Photography: Prashobh & Arun



MATTERS

Subscription Charges: 100/year (online edition) 1000/year (printed edition)

Our aim is to serve students, teachers, administrators and other stakeholders by providing valuable insights into the educational scenario, innovations in teaching and learning, policy changes, and career opportunities. Whether you're navigating the challenges of administration, teaching the next generation, preparing for your future career, or thinking of transforming your educational landscape, this magazine is your first hand information and expert perspectives for your journey.

Disclaimer

The views and opinions if any expressed in this magazine are those of the contributors and do not necessarily reflect the official policy or position of the publisher. While every effort has been made to ensure the accuracy of information provided, the magazine assumes no responsibility for errors, omissions, or any outcomes related to the use of this information. Reader discretion is advised.

Curated Stories

Higher Education Matters Magazine prides itself on the educational content published in the magazine in print. We believe knowledge is power, which is why we work so hard to cover topics about local to global issues and initiatives pertaining to higher education. Throughout the magazine you may come across articles open to every reader irrespective of online or print editions. If you have any questions about the nature of the magazine, please reach out to us.

Sponsors

We receive stories and observations fulfilling the aims and objectives of the magazine from the like minded people engaged with higher education sector. We take on partners who are providing articles & news and whose contributions fall within our editorial guidelines.

Copyright Statement and Policy:

The articles published on this print and the magazine's web site owns by the editorial team. Portions of the articles on this web site may be freely redistributed in other media and non-commercial publications with the due mention of their source.

Welcome to *Higher Education Matters* Magazine, a monthly publication where we provide diverse and engaging content for informational purposes only. While we strive for accuracy, we cannot guarantee the completeness or reliability of all content. The views expressed are those of the contributor and do not necessarily reflect our official stance. We are not responsible for external links or usergenerated content, and we disclaim liability for any damages resulting from the use of our site and information. All content is protected by copyright, and unauthorized use is prohibited. By using our information, you agree to this disclaimer and our terms. This magazine should be used as a source of inspiration only. for questions, contact us @ contact.hematters@gmail.com



US THE BEST MATTERS

STATE INSTITUTIONS SECURE TOP POSITIONS IN NIRF

The National Institutional Ranking Framework (NIRF), evaluates institutions based on various parameters, including teaching, learning, research, and infrastructure. In 2024 report of NIRF, State Universities and many Colleges of Kerala have secured glaring positions under various categories. The article provides a general outline and the list of institutions secured these positions. This information will enhance the understanding of the quality & excellence of our institutions.



FYUGP

FOUR YEAR UNDERGRADUATE PROGRAMMES



Kerala introduced the fouryear undergraduate scheme for degree programmes in the State since the academic year 2024-25. A brief outline of the paradigm shift through this reformative step in the higher education sector of the State

CONTENTS

 $\boxed{3}$

HIGHER EDUCATION HUB



The Government of Kerala envisions that the State to become a higher education hub by 2030. The government policies facilitate the foundations for it. A number of quality enhancement initiatives have been launched to achieve this goal

24

TRANSFORMING CAMPUSES

Every element of a campus plays a role in education, fostering a holistic learning ecosystem. This article explores an evolving culture with practical examples illustrating this transformation, highlighting the interconnectedness of space, people, and innovation in shaping educational outcomes.

KERALA KERALA INSTITUTIONAL RANKING FRAMEWORK

The State Higher Education Council in Kerala, recognizing the unique nature and diversity of its higher education institutions and their alignment with the state's socio-cultural heritage, has introduced a quality ranking mechanism. This system is inspired by the benchmarking criteria and indicators of NIRF, while also incorporating evaluation components that highlight Kerala-specific attributes.

PG CURRICULUM FRAMEWORK

IMPORTANT FEATURES OF THE UGC'S NEW PG CURRICULUM FRAMEWORK

The University Grants Commission (UGC) has introduced a new curriculum and credit framework for postgraduate (PG) programmes. In the event of FYUGP introduced in many states, this framework is expected to enhance flexibility, interdisciplinary learning, and global competitiveness in higher education

28

UNDERGRADUATE INTERNSHIPS

An undergraduate internship programme offers students practical, hands-on experience in their field of study, bridging academic learning with professional skills, networking opportunities, and career development. This article speaks about the current opportunities.

38

OUTCOME BASED EDUCATION

FACULTY IN HIGHER EDUCATION INSTITUTIONS IN KERALA MADE TREMENDOUS LEAD IN IMPLEMENTING OBE

Outcome-Based Education (OBE) is a transformative approach to teaching and learning, placing emphasis on the outcomes students achieve rather than the process of instruction. This series of topc delves into the principles, benefits, and practical implementation of OBE, showcasing how it empowers learners with the skills, knowledge, and competencies essential for success in a dynamic world. It will continue on following issues also.

30

SKILL EDUCATION

KERALA IS SETTING A MODEL FOR HOLISTIC EDUCATION

The Government of Kerala takes a significant step towards enhancing skill education in higher education, emphasizing practical training, integrating skill development into the FYUGP, and fostering impactful institutional partnerships.



CENTRES OF Excellence

To initiate quality research and academic excellence, the Government of Kerala is establishing Centres of Excellence in emerging fields, promoting advanced research, innovation, sustainability, and globally competitive advancements across various domains.

32

KNOWLEDGE ECONOMY-A THEORETICAL REVIEW

Most economists have characterised Knowledge Economy as an entity independent of Capitalism. Even specialists forget Capitalism, Prof. Rajan Gurukkal makes a theoretical review on the subject



REGULAR UPDATES

- events & news
- university updates
- campus news around globe
- higher education glossaryconnect with universities
- important contacts

SPECIAL FEATURES

- Multidisciplinary Adaptability
- Student Centric approach
- Kairali Research Awards
- Quest for Research Journals
 Tapping Neurodiversiy
- Tapping Neurodivers
- Innovative Pedagogy

CONTENTS

EVENTS & NEWS

International Conclave on Next-Gen Higher Education

14 & 15 January 2025 at CUSAT, Kochi

The Department of Higher Education, in partnership with the Kerala State Higher Education Council, is hosting the International Conclave on Next-Gen Higher Education—a visionary platform designed to tackle critical challenges in higher education and chart a path for its future transformation.

This prestigious event will bring together an eclectic mix of global thought leaders, academic experts, and key stakeholders to explore pioneering strategies and share best practices in areas such as cutting-edge research, innovative curriculum design, financial sustainability, advanced assessment techniques, international collaborations, and the integration of artificial intelligence (AI) into education. Scheduled for January 14 and 15, 2025, the conclave will take place at the Cochin University of Science and Technology (CUSAT) in Kochi. The Honorable Chief Minister of Kerala, Shri. Pinarayi Vijayan, will inaugurate the event.

Advances in Science, Engineering & Technology-2025)

March 22-23, 2025 at Chennai

The 3rd International Conference on Advances in Science, Engineering, and Technology (ICASET-2025), themed Enabling Sustainable Development through Science, Engineering and Technology, is set to take place in Chennai. This conference will serve as a platform to explore innovative solutions and advancements that drive sustainable development across these critical fields.

QS India Summit 2025

January 27-28, 2025 at Goa

The QS India Summit 2025, themed "Creating Equitable Educational Partnerships Amid Global Uncertainties: India's Role in Fostering Innovation and Research" will take place on January 27–28 in Goa. This landmark event will convene global leaders in higher education to explore India's pivotal role in shaping the future of education in an ever-changing world. Key discussions will center on fostering innovation in teaching, enhancing research collaboration, and building impactful international partnerships. The summit will also offer valuable insights into India's expanding influence on global education trends and its contributions to creating a more equitable and resilient educational ecosystem.

APAIE 2025 Conference

March 24-28, 2025 at Delhi

The APAIE 2025 Conference, organized by the Asia-Pacific Association for International Education (APAIE), a leading non-profit organization dedicated to promoting international education and fostering institutional collaboration across the Asia-Pacific and beyond, will center around the theme Cultivating Global Citizens for the Future: The Higher Education Imperative. This conference will highlight the critical role of higher education in shaping future global citizens, with a special focus on fostering partnerships within the Asia-Pacific region and strengthening global collaborations.

International Conference on e-Learning & Innovative Pedagogies

April 25-26, 2025 at Taiwan

The Eighteenth International Conference on e-Learning & Innovative Pedagogies will spotlight research with a special focus on Learning from Artificial Intelligence: Pedagogical Futures and Transformative Possibilities. Alongside this central theme, the conference will also explore topics such as digital pedagogies, emerging digital institutions and spaces, technologies of mediation, and the design of social transformations through innovative educational practices.

International Conference on Geology and Geophysics

January 30-31, 2025 at Bangalore

The International Conference on Geology and Geophysics seeks to unite leading academic scientists, researchers, and scholars to exchange knowledge and share their latest research findings across all facets of geology and geophysics. This premier interdisciplinary platform also offers an opportunity for researchers, practitioners, and educators to present and discuss recent innovations, emerging trends, pressing challenges, and practical solutions within the fields of geology and geophysics.

ITEP-Committee Report

submitted on 28 November 2024

The expert committee established by the Kerala State Higher Education Council (KSHEC) on December 22, 2023, to develop a curriculum for implementing the 4-Year Integrated Teacher Education Programme (ITEP) in Kerala, submitted its final report on November 28, 2024, to the Hon'ble Minister for Higher Education and Social Justice, Dr. R. Bindu.

The committee's primary objective was to align the proposed ITEP curriculum with the National Council for Teacher Education (NCTE) framework while adapting it to the unique needs and contexts of Kerala's education system. Additionally, the committee provided recommendations for transforming teacher education in the state to ensure it meets contemporary educational demands.

Currently, teacher education in Kerala includes programmes such as D.El.Ed., B.Ed., and M.Ed., with B.Ed. programmes adhering to NCTE's 2014 regulations. Teacher education institutions in the state, affiliated with four major universities, comprise government, aided, and self-financed colleges. These institutions have undergone periodic changes, with the most notable being the transition from a one-year B.Ed. to a twoyear B.Ed. programme in 2015.

The World Conference on Education and Training (WCET 2025)

Aug 19-21, 2025 at Tokyo, Japan

WCET 2025 will feature breakout sessions and poster exhibitions as part of its three-day program, focusing on 18 key topics, including Medical and Health Education, Higher Education, Education for Sustainability and Transformational Learning, Management Education, Educational Technology, and Distance Education, among others. The conference aims to bring together a diverse audience, including school leaders, teachers, faculty advisors, student counsellors, researchers, administrators, and managers.

K-REAP-ERP solutions for higher education institutions

Commenced in November, 2024

Aligned with the recommendations of the Higher Education Reforms Commission and the Commission for Examination Reforms in 2022, the Department of Higher Education, Government of Kerala, has launched the Kerala Resources for Education Administration and Planning (K-REAP) project. Implemented through the Kerala State Higher Education Council (KSHEC) in collaboration with the Additional Skill Acquisition Programme (ASAP) Kerala, this initiative aims to deliver integrated technology solutions for the efficient governance and administration of universities and colleges.

K-REAP includes modules for admissions, examinations, and student management, fostering seamless communication, enhanced data accuracy, and paperless operations across Kerala's higher education sector. The Hon'ble Minister for Higher Education and Social Justice, Dr. R. Bindu, inaugurated the pilot phase of the project in select universities. The initiative will soon be extended to all higher education institutions in the state, benefiting students and stakeholders alike with its transformative impact.

REACHING NEW MILESTONES

KERALA Institutions Climb The Ranks

8

A HISTORICAL OVERVIEW*

The first university in Kerala was set up in the erstwhile state of Travancore in 1937 at Trivandrum now Thiruvananthapuram. Two of the princely states that went on to become constituent parts of Kerala, namely Cochin and Travancore were at the forefront of other states of the Indian union at the time of independence; indeed they ranked No. 1 and No. 2 in the literacy rates. The need for a university of its own for the region was insistent and the University of Travancore began functioning as an affiliating type university with 10 colleges (six being Government colleges and four under private management) first for the princely state of Travancore, and in due course became the University of Kerala after the reorganization of states in 1956 for Travancore, Cochin and the Malabar District of the Madras Presidency.

In 1939, the College of Engineering started functioning in Trivandrum to impart instruction in degree and diploma courses in civil, mechanical and electrical engineering. Even earlier, with considerable prescience, a Department of Research was started at the University to promote research in scientific and technological fields. By 1939, this had evolved into a Central Research Institute with a mandate to engage in both theoretical and applied scientific and technological research.

KERALA'S STANDING: KEY INSIGHTS

According to the latest All India Survey on Higher Education (2021-22), there are 1,168 universities and university-level institutions along with 45,473 colleges distributed across 28 states and 8 union territories in India. In this context, Kerala ranks 15th with a total of 25 universities (across all types). Among the 45,473 colleges nationwide, Kerala has 1,463 registered institutions in AISHE, placing it 16th among the states.

Kerala performed strongly in key areas of higher education as per the report. It ranked among the states with a high Gross Enrolment Ratio (GER) at 41.3, indicating robust participation in higher education. Kerala also demonstrated significant gender equity in education with a Gender Parity Index (GPI) of 1.01, reflecting balanced participation of males and females. Additionally, it stood out for its college density, registering 46 colleges per lakh population of eligible population (ages 18-23), one of the highest in the country while the national average is 30.

Regarding average enrollment per college, Kerala records an average of 594 students per college, while the all-India average stands at 709. Kerala recorded a total female enrolment of 56.3% in higher education, significantly exceeding male enrolment, highlighting its strong gender equity in the education sector.

* Sources: Dr. Gangan Prathap-Research and Innovation in the HE sector in Kerala - Problems and Prospects & All India Survey on Higher Education, 2021-22



Institutions under top 100

SNAPSHOT OF HIGHER EDUCATION KERALA

Universities and Higher Education Institutions

According to the All India Survey on Higher Education (AISHE 2021-22), Kerala has 25 university-level institutions, comprising:16 state universities, one central university, deemed-to-be universities, three six Institutes of National Importance These universities cater to a wide range of academic and professional fields. Out of the 16 State Universities, six offer a diverse array of courses across Arts, Science, and Engineering disciplines affiliating and multidisciplinary universities. Others focus on specialized areas, such as: Malayalam Language and Literature, Sanskrit and Vedic Studies, Agriculture and Allied Sciences, Law, Performing and Fine Arts, Technology and Engineering. The State has an Open University also.

Arts and Science Colleges

Kerala has 230 Arts and Science colleges, including 66 government colleges and 10 government-aided colleges. Additionally, there are numerous unaided/self-financing Arts and Science colleges affiliated with the state universities. Excluding self-financing institutions, the districts of Ernakulam and Thiruvananthapuram have the highest number of Arts and Science colleges (26), followed closely by Kottayam (24 colleges). Thiruvananthapuram and Kozhikode host the largest number of government colleges, with 10 each.

Stand-Alone Institutions

In addition to universities and affiliated colleges, Kerala hosts several stand-alone institutions directly managed by state or central government departments. These institutions contribute to the higher education landscape by offering specialized courses and training. This robust network of institutions and programmes highlights the diversity and inclusivity of higher education in Kerala, catering to a wide arrav of academic interests and professional aspirations.

Institutions ranked in order along with their ranks in the NIRF ranking 2024 under the category of colleges: 1. Rajagiri College of Social Sciences 20 2. University College, Thiruvananthapuram 22 3. St. Teresa's College, Ernakulam 46 4. Sacred Heart College 48 5. Govt. College for Women, Trivandrum 49

- 6. Maharaja's Govt. College, Ernakulam 53 7. St. Thomas College, Thrissur 57
- 8. St. Joseph's College, Devagiri, Kozhikode 61
- 9. Bishop Moore College 62
 10. Mar Ivanios College, Trivandrum 66
 11. S.B. College, Changanassery 69
 12. Mar Athanasius College, Kothamangalam 74
 13. Vimala College, Thrissur 80
- 14. Government Victoria College, Palakkad 84

15. St. Joseph's College, Irinjalakuda 85

16. CMS College, Kottayam 92

Enrolment Statistics (2022-23)

In the academic year 2022-23, a total of 3,53,000 students were enrolled in Arts and Science colleges, (excluding unaided colleges) affiliated with University of Kerala, Mahatma Gandhi University, University of Calicut, and Kannur University). The female enrolment was 2,30,000 students (65.3%). In degree courses, 47.8% enrolled in Bachelor of Arts (BA) programmes, 36.7% pursued Bachelor of Science (B.Sc.) courses, 15.6% opted for Bachelor of Commerce (B.Com.) programmes. Females constituted 65.4% of total enrolment in undergraduate courses, with a notable trend of higher male representation in B.Com. compared to B.Sc. and BA programmes.

Programme Preferences

For BA degree programmes, 27 subjects were offered, with Economics attracting the highest enrolment, followed by English. B.Sc. programmes provided 31 subjects, with Physics being the most popular choice, followed by Mathematics.

Postgraduate Programmes

During the same academic year, 23,352 students enrolled in postgraduate programmes, with females comprising 65.7% of the total enrolment.

Source:Economic Review 2023 & All Kerala State Higher Education Survey (AKSHES) 2024

KERALA'S PERFORMANCE: GLIMPSES INTO NIRF 2024

The National Institutional Ranking Framework (NIRF), introduced by the Government of India, provides a comprehensive benchmark for evaluating colleges and universities across various parameters, including academic excellence, infrastructure, and placements. The NIRF 2024 rankings, announced on August 12, highlighted the remarkable progress of Kerala's educational institutions, showcasing their strengths in diverse domains. This achievement reflects not just numerical success but also the dedicated efforts of educators, the innovative spirit of students, and strong community support. This year's rankings revealed notable improvements among Kerala's state universities, colleges, and professional institutions.

State Universities

University of Kerala emerged as the top-ranked university in the State, climbing from 24th position last year to 21st nationally. Cochin University of Science and Technology (CUSAT) also improved, advancing from 37th to 34th place. Conversely, Mahatma Gandhi University (MGU) dropped to 37th from last year's 31st position, and University of Calicut slid to 89th from 70th. In the category of state public universities, University of Kerala secured 9th place nationally, followed by CUSAT at 10th, MGU at 11th, and University of Calicut at 43rd.

Arts and Science Colleges

Rajagiri College of Social Sciences, Kochi, claimed the top position among Kerala's colleges, surpassing University College,

Thiruvananthapuram. Rajagiri made a significant leap from 30th to 20th nationally, while University College rose from 26th to 22nd. Other colleges that ranked within the top 50 include St. Teresa's College, Ernakulam (46th), Sacred Heart College, Kochi (48th), and Government College for Women, Thiruvananthapuram (49th).

Engineering Colleges

In engineering, NIT Calicut was ranked 25th nationally, though it fell two spots compared to last year. The Indian Institute of Space Science and Technology (IIST) ranked 51st, while IIT Palakkad secured 64th place.

Management Schools

In the management category, IIM-Kozhikode retained its 3rd position nationally. NIT Calicut (76th), CUSAT (81st), and Rajagiri Business School (93rd) were among the top 100.

Medical Institutions

Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, ranked 13th among medical institutes, while Government Medical College, Thiruvananthapuram, secured the 42nd spot.

Dental Institutions

The Government Dental College, Thiruvananthapuram, was the only dental college from Kerala to make to the rankings.

Law Institutions

National University of Advanced Legal Studies (NUALS), Kochi, ranked 38th among law institutes.

Architecture and Planning Institutions

In architecture and planning, NIT Calicut achieved an impressive 3rd place, followed by the College of Engineering, Thiruvananthapuram, at 18th.

Agriculture and Allied Sectors

Kerala Agricultural University ranked 16th, and Kerala University of Fisheries and Ocean Studies secured the 30th spot in the agriculture and allied sectors category.

Kerala's remarkable performance in the NIRF 2024 rankings underscores the state's dedication to fostering academic excellence and innovation, further strengthening its reputation as a hub for quality education in India.

Institution	NIRF Rank	Category
University of Kerala	9	Universities
University of Kerala	21	State Public Universities
National University of Advanced Legal Studies (NUALS), Kochi	38	Law
Cochin University of Science and Technology (CUSAT), Kochi	81	Management Management
Rajagiri Business School, Kochi	93	
Government Medical College (GMC) Thiruvananthapuram	42	Medical
Government Dental College	21	Dental
College of Engineering Trivandrum (CET) Thiruvananthapuram	18	Architecture
Kerala Agricultural University (KAU), Thrissur	16	Agriculture & Allied Institutions
Kerala University of Fisheries & Ocean Studies (KUFOS), Kochi	30	

Top 10 Instituions in India

- 1. Indian Institute of Technology Madras
- 2. Indian Institute of Science, Bengaluru
- 3. Indian Institute of Technology Bombay
- 4. Indian Institute of Technology Delhi
- 5. Indian Institute of Technology Kanpur
- 6. Indian Institute of Technology Kharagpur
- 7. All India Institute of Medical Sciences Delhi
- 8. Indian Institute of Technology Roorkee
- 9. Indian Institute of Technology Guwahati
- 10. Jawaharlal Nehru University

Top 10 Universities in India

- 1. Indian Institute of Science, Bengaluru
- 2. Jawaharlal Nehru University
- 3. Jamia Millia Islamia
- 4. Manipal Academy of Higher Education, Manipal
- 5. Banaras Hindu University
- 6. University of Delhi
- 7. Amrita Vishwa Vidyapeetham
- 8. Aligarh Muslim University
- 9. Jadavpur University
- 10. Vellore Institute of Technology

Top 11 Public Universities in India

- 1. Anna University, Chennai
- 2. Jadavpur University, Kolkata
- 3. Savitribai Phule Pune University, Pune
- 4. Calcutta University, Kolkata
- 5. Panjab University, Chandigarh
- 6. Osmania University, Hyderabad
- 7. Andhra University, Visakhapatnam
- 8. Bharathiar University, Coimbatore
- 9. Kerala University, Thiruvananthapuram
- 10. Cochin University of Science and Technology, Kochi
- 11. Mahatma Gandhi University, Kottayam

Top 10 Colleges in India

- 1. Hindu College, Delhi
- 2. Miranda House, Delhi
- 3. St. Stephens's College, Delhi
- 4. RK Mission Vivekananda Centenary College, Kolkata
- 5. Atma Ram Sanatan Dharm College, New Delhi
- 6. St. Xavier's College, Kolkata
- 7. PSGR Krishnammal College for Women, Coimbatore
- 8. Loyola College, Chennai
- 9. Kirori Mal College, Delhi
- 10. Lady Shri Ram College for Women, New Delhi

NIRF INVOLVES KEY PARAMETERS:

1.Teaching, Learning, and Resources (TLR)

- Student Strength, including research and Doctoral Students: Number of students and their distribution across different programmes.
- Faculty Quality: Faculty qualifications, experience, and research output.
- Infrastructure and Facilities: Availability and quality of classrooms, libraries, laboratories, and other learning resources.

2. Research and Professional Practices (RPC)

- Research Output: Quantity and quality of research publications, patents, and funded projects.
- Collaborations and Impact: Industry and academic collaborations, and the impact of research on society and industry.

3. Graduation Outcomes (GO)

- Placement and Employment: Rate of students securing employment and the quality of employment.
- Higher Studies: Number of graduates pursuing higher education.
- Median Salary: Average salary of graduates within a specified period after completing their studies.

4. Outreach and Inclusivity (OI)

- Accessibility and Inclusivity: Efforts to promote diversity and inclusion among students and staff.
- Social Outreach: Engagement in community service and outreach programmes.

5. Perception (PR)

 Reputation: National and international reputation of the institution based on surveys and feedback from academic peers, employers, and students. It measures how the industry, academic community, and research community perceive an institution

PATH TO HIGHER EDUCATION HUB



Kerala envisions establishing itself as a higher education hub by 2030, emphasizing academic excellence, advanced infrastructure, and inclusivity. The state aims to attract both domestic and international students by capitalizing on its rich cultural heritage, scenic landscapes, and robust government backing.

The vision articulated by the Honourable Chief Minister of Kerala to make the state a "higher education hub by 2030" is both ambitious and strategic. It envisions a transformative shift in Kerala's higher education sector, aiming to position the state not only as a leading destination for domestic students but also as a top choice for international students. This goal is in line with the state's broader economic and social development objectives and is designed to harness Kerala's inherent advantages—its natural beauty, cultural heritage, and educational infrastructure—into a global education center.

Higher Education Hub

A "higher education hub" can be understood as a focal point for higher learning, where universities and institutions serve a significant role in attracting students from both within the country and abroad. In this context, Kerala aims to be a place where educational offerings are world-class, diverse, and capable of meeting the demands of a global student body. For Kerala to become such a hub, it needs to ensure that its higher education institutions are not only able to cater to the needs of local students but also appeal to those from other states in India and international students seeking quality education in an environment conducive to learning and personal growth.

Existing Strengths and Achievements

Kerala is well-positioned to pursue this vision, with a strong foundation already in place. The state is home to 16 universities and over 1,600 educational institutions, comprising a well-established and expansive higher education ecosystem. Kerala's Gross Enrollment Ratio (GER) in higher education surpasses the national average, reflecting a robust local education framework that effectively meets the needs of its population.

Kerala's higher education institutions are recognized for their strong research output and commendable positions in national academic rankings, underscoring the state's leadership in the education sector. Over the past decade, particularly under the leadership of Chief Minister Pinarayi Vijayan, the state has made significant investments in modernizing its higher education infrastructure. These efforts include upgrading physical facilities and enhancing academic resources, further solidifying Kerala's reputation as a hub for quality education and research. This strong foundation provides the momentum for Kerala to transform into a global higher education hub, building on its achievements and striving to meet the needs of an increasingly interconnected and competitive world.

Avail this hands-on training opportunity & free LMS

www.kshec.kerala.gov.in

request can be sent to msheckerala@gmail.com call: 98465 89662 7561018708

Hands-On-Training (Online Mode)

Moodle-Learning Management System (LMS)

The Kerala State Higher Education Council organises hands-on workshops on specific intervals on the topic 'MOODLE-based Learning Management System (LMS)' in online mode for the faculty members of the higher education institutions in the state. Heads of Institutions (Colleges & University Departments) can avail of this opportunity by sending the list of faculty members.

Workshop Topics:

- Optimizing Moodle for Effective Course Management and Resource Sharing
- Engaging Learning Experiences: Incorporating Assignments, Quizzes, and Interactive Tools
- Innovative Course Design: Pedagogical Approaches and the Use of Technology
- Enhancing Collaboration: Utilizing Wikis, Blogs, and Discussion Forums in Moodle
- Future Directions in Education: Leveraging Technology and Case Studies for Learning Improvement



Institutional rankings are a cornerstone of modern higher education, offering structured comparisons across metrics like academic quality, research output, and societal impact, which significantly influence the decisions of students, parents, policymakers, and institutions. Published bv independent organizations, these rankings drive quality improvement, guide resource allocation, foster competition and collaboration, enhance global visibility, and shape academic priorities such as employability and infrastructure development. Their evolution has been fueled by the adoption of standardized evaluation criteria, growing stakeholder reliance, and increased accessibility through digital platforms, cementing their role in shaping the performance and reputation of higher education institutions worldwide.

Why KIRF?

Kerala, renowned for its progressive socioeconomic indicators and strong emphasis on education, occupies a unique position in India. Its relatively small geographical size is complemented by exceptional biodiversity, rich cultural long-standing heritage, and а commitment to democratic values and social equity. These factors collectively underline the state's need for a dynamic higher education system that not only meets global standards but also aligns with local priorities and aspirations. Kerala's higher education sector is marked by diversity, encompassing government, aided, and unaided institutions. This variety ensures widespread access but also creates challenges in maintaining consistent quality and fostering healthy competition. The sector must strike a balance between collaboration and competition to achieve excellence, adaptability, and relevance in a rapidly evolving global educational landscape.

National ranking frameworks like the National Institutional Ranking Framework (NIRF) often do

Kerala Institutional Ranking Framework (KIRF) aims to preserve the integrity of national standards while integrating state-specific elements to better reflect the unique socio-cultural context of Kerala's higher education landscape not fully capture the unique socio-cultural and developmental contexts of individual states. Kerala requires a framework that incorporates its specific priorities, such as environmental sustainability, social inclusivity, and regional development.

A state level ranking framework can drive institutions to improve their performance by offering a structured mechanism for assessment and benchmarking. This can enhance academic quality, research output, and student satisfaction across the board. By fostering competition among institutions within the state, a localized ranking system can encourage innovation, better resource utilization. and continuous comprehensive improvement. А ranking framework tailored to Kerala can serve as a valuable resource for students, parents, and policymakers in making informed decisions regarding education and investment. Kerala has a rich legacy of promoting democratic, secular, and scientific values. A state-specific framework can ensure that these core principles are integrated into the evaluation criteria, promoting institutions that uphold these values.

KIRF-Salient Features

Recognizing these needs, the Kerala State Higher Education Council (KSHEC) has introduced the Kerala Institutional Ranking Framework (KIRF). While drawing from the strengths and core principles of the NIRF, KIRF is designed to reflect Kerala's unique characteristics. It includes parameters that address the state's distinctive priorities, such as inclusivity, Scientific Temper and Secular Outlook.

Features

Eligibility Criteria for Participation

All Higher Education Institutions (HEIs) within the State are eligible to participate in the ranking, irrespective of their disciplinary focus. State universities with affiliated colleges are to exclude information pertaining to their affiliated institutions. To qualify, institutions must have graduated at least three batches of students from full-time undergraduate (UG) or postgraduate (PG) programmes, where UG programmes are a minimum of three years and PG programmes at least two years in duration.

Categories of Institutions

The 12 different categories under which the HEIs are ranked include

- Universities: Higher education institutions that offer undergraduate, postgraduate, and doctoral programmes across various disciplines, focusing on both teaching and research.
- **Colleges:** Educational institutions offering undergraduate programmes, often affiliated with a university, primarily focused on teaching.
- Agriculture and Allied Sector: Institutions specializing in education and research related to agriculture, including fields like horticulture, forestry, and veterinary sciences.
- Architecture: Institutions that focus on the study and practice of designing buildings and other physical structures.
- **Dental:** Institutions offering education and training in dentistry, including the study of oral health and treatment.
- Engineering: Institutions that provide education and research in various branches of engineering, focusing on the application of science and technology.
- Law: Institutions offering education in legal studies, preparing students for careers in the legal profession.
- Management: Institutions focused on education and training in business management, leadership, and administration.
- Medical: Institutions that provide education and training in the field of medicine, including the study and practice of healthcare.
- Nursing: Institutions dedicated to the education and training of nurses, focusing on patient care and healthcare services.
- **Pharmacy:** Institutions offering education in pharmaceutical sciences, focusing on the preparation and dispensing of medications.
- Teacher Education: Institutions that provide training and education for future teachers, focusing on pedagogy and educational practices.

KIRF is designed to reflect Kerala's unique characteristics. It includes parameters that address the state's distinctive priorities, such as inclusivity, Scientific Temper and Secular Outlook.

Guidelines for Participation in the Kerala Institutional Ranking Framework

Institutions wishing to participate in the KIRF ranking process must register through the official https://kirf.kshec.org. portal at Submission of data for the All Kerala Higher Education Survey (AKHES) conducted by the Kerala Higher Education Council is mandatory for participation. A detailed demonstration video available on the KIRF website outlines the data submission process. Using this online platform, institutions are required to provide their data, ensuring a streamlined and efficient submission process. To maintain accuracy and integrity, KIRF will conduct thorough verification of the submitted data where feasible. Relevant data will be compiled, and software algorithms will calculate metrics to rank institutions accordingly.

The ranking criteria are based on both NIRF standards and state-specific parameters, incorporating a mix of qualitative and quantitative metrics. Quantitative metrics constitute 80% of the evaluation, with the remaining 20% comprising qualitative aspects.

The Kerala State Higher Education Council (KSHEC) is committed to administering and maintaining the implementation of this ranking system on an annual basis, ensuring consistency and reliability in the evaluation process.

Institutions are required to designate a Nodal Officer to ensure the accurate submission of data through the KIRF portal for the designated survey, ranking, or assessment year. To ensure reliability, specific data points will be crossverified using trusted third-party sources. KIRF, either independently or in collaboration with designated partner agencies, will authenticate the data, extract relevant information, compute metrics using advanced software, and determine rankings based on the analyzed data.

The Kerala State Higher Education Council (KSHEC) is committed to administering and maintaining the implementation of this ranking system on an annual basis, ensuring consistency and reliability in the evaluation process.

Metrics and Evaluation Criteria

KIRF uses a comprehensive set of metrics for evaluating and ranking institutions, categorized into five major parameters. Each parameter includes sub-parameters, which are assigned specific weights to determine their overall significance.

- Total Indicators: 20 evaluation indicators.
- Weight Distribution: Quantitative metrics constitute approximately 80%, while qualitative metrics account for the remaining 20%.

These metrics, crafted by KSHEC, undergo an annual review and implementation. The parameters are based on national-level benchmarks (from NIRF) and also include statespecific factors, ensuring relevance and inclusivity.

KIRF-EVALUATION PROCESS

- 1. Data Identification: For each sub-parameter, relevant data is collected, including metrics such as research productivity, research impact, and h-index.
- 2. Metric Derivation: Scores for sub-parameters are computed and aggregated to derive category scores. These are weighted to calculate the institution's overall score, with a maximum of 100 points.
- 3. Ranking: Institutions are ranked based on their total weighted scores.



Key Steps in the KIRF Process

- 1.Registration: Institutions must register via the designated KIRF portal (https://kirf.kshec.org).
- 2. Data Submission: Participation requires submitting data to the All Kerala Higher Education Survey (AKHES), as outlined in the portal's demo video.
- 3.Accuracy Verification: Submitted data is authenticated by KIRF, with third-party sources used for validation where necessary.
- 4. Metric Calculation: Using software algorithms, KIRF computes scores for individual metrics based on collected data. These scores are aggregated to determine overall scores.
- Annual Assessment: Rankings are updated annually based on the most recent data and institutional performance.

The performance parameters are organised into five broad heads, and have been further elaborated into suitable sub-heads. Each broad head has an overall weight assigned to it.

1.Teaching, Learning & Resources (TLR)

- 1. Student Strength (SS)
- 2. Faculty-Student Ratio (FSR)
- 3. Faculty Qualification and Experience (FQE)
- 4. Online Education (OE)
- 5. Subscription to e-journals (SEJ)
- 6. Financial Resources and their Utilisation (FRU)

2. Knowledge Dissemination and Research Excellence (KDRE)

- 1. Research Productivity (RP)
- 2. Research Impact (RI)
- 3. Intellectual Property Rights (IPR)
- 4. Research Footprint/Consultancy/Startups (RFCS)

3. Graduation Outcome (GO)

- **a.** Metric for University Examinations (GUE) b. Metric for Entrance Examinations UGC-
- NET/JRF/CSIR/GATE/GRE (GEE)
- c. Placement and Higher Studies (PH)

4. Outreach and Inclusivity (OI)

- a. Percentage of Students from outside the State/Country (Campus/Region Diversity-RD)
- b. Percentage of First Generation Learners (FGL)
- c. Facilities for Differently Abled (FDA)
- d. Social Inclusiveness(SI)

5. Scientific Temper and Secular Outlook (STSO)

- a. Initiatives/programmes organised/participated by students and faculty of the institutions reflective of scientific temper and secular outlook (STSO)
- b. Adoption of Green Technology (GT)
- c. Accreditation and Ranking (AR)

Data Collection and Sourcing

Institutional Data:

- 1. Institutional Data: Each institution's designated Nodal Officer is responsible for submitting accurate and up-to-date data on the KSHEC's KIRF portal.
- 2. Bibliometric Data: Metrics related to research productivity, citations, and h-index are sourced from trusted databases such as Scopus or Web of Science.

Overall rankings are determined, with due consideration given to the institution's type. By creating a ranking framework that mirrors the NIRF while addressing Kerala's unique sociocultural and institutional needs, KIRF aspires to foster academic excellence and provide a robust evaluation system for higher education institutions in the state.

PERFORMANCE PARAMETERS



INTERNATIONAL Rankings & Kerala

International rankings in higher education evaluate and compare universities and colleges globally based on various criteria. In a notable achievement for Kerala's higher education, the University of Kerala (UoK) ranked 339th in the QS World University Rankings Asia 2025, while Mahatma Gandhi University (MGU) made strides in the Times Higher Education Rankings. Kerala University also secured the 88th spot in the QS World University Rankings Southern Asia 2025, which evaluates institutions on criteria like academic reputation, research quality, studentto-faculty ratio, job prospects, and the presence of internationally qualified faculty.

Indian institutions have faced challenges in achieving prominent positions in global rankings, with limited representation from Kerala among them. The ARWU, recognized as one of the most esteemed yet debated rankings, underscores this broader trend; only one Indian institution, the Indian Institute of Science, Bangalore, has secured a spot in its Top 500 list. In the Scimago Institutions Rankings 2020, among the 3,897 higher education institutions ranked globally, 241 (6.18%) were from India, including eight (3.32% of the Indian total) from Kerala.

Despite these challenges, Kerala's higher education institutions have begun to gain recognition. In the QS World University Rankings Asia 2025, the University of Kerala (UoK) secured the 339th position, and in the QS World University Rankings Southern Asia 2025, it achieved an impressive 88th place. These rankings evaluate parameters such as academic reputation, research quality, student-to-faculty ratio, employability, and the presence of internationally qualified faculty.

Additionally, Mahatma Gandhi University (MGU) advanced significantly in the Times Higher Education World University Rankings 2025, moving from the 501-600 range last year to the 401-500 category. This ranking assesses institutions on 18 criteria, including teaching quality, research impact, and international collaboration. marking а commendable achievement for Kerala's higher education sector.

Some prominent rankings followed globally :

QS World University Rankings: It has the criteria which includes Academic reputation (40%), employer reputation (10%), faculty/student ratio (20%), citations per faculty (20%), international faculty ratio (5%), international student ratio (5%).

Times Higher Education (THE) World University Rankings: The important criteria includes Teaching (30%), research (30%), citations (30%), international outlook (7.5%), and industry income (2.5%).

Academic Ranking of World Universities (ARWU or Shanghai Ranking): This considers the criteria including Quality of education (10%), quality of faculty (40%), research output (40%), including Nobel Prizes and Fields Medals.

U.S. News & World Report Best Global Universities:

Criteria: Global research reputation (12.5%), regional research reputation (12.5%), publications (10%), cited publications (10%), and international collaboration (10%).

CWTS Leiden Ranking: Criteria: Bibliometric indicators such as the number of publications and citations.



Higher Education Matters February 2025 19

WHY WE NEED THE FYUGP

FOUR YEAR UNDERGRADUATE PROGRAMMES

Globally, undergraduate programmes are generally structured as either three-year or four-year degree programmes, with each system shaped by unique educational philosophies, cultural expectations, and institutional frameworks. In countries like the United States, Canada, Australia, the United Kingdom, and Germany, undergraduate programmes typically span four years, culminating in a bachelor's degree, although variations exist. For example, in the UK, most traditional undergraduate programmes are three years long, but some universities offer four-year options, such as sandwich courses or integrated master's Germany, undergraduate programmes. In education often includes preparatory or foundation years, resulting in longer programme durations.

In India, the evolution of undergraduate education, particularly in engineering, has been influenced by international frameworks like the Washington Accord, established in 1989. To become a signatory, India introduced critical reforms, including the choice-based credit system, the semester system, and the establishment of the National Board of Accreditation (NBA).

PROGRAMME

ORIENTATION PROGRAMME FOR +2 STUDENTS

State Level Inauguration

10:00 - 12:00

y Scho puram .gov.in

16 May, 2

These initiatives ensured that engineering education in India met global standards of quality and competency, facilitating international recognition and mobility for graduates. The Washington Accord, along with the Sydney and Dublin Accords, has set essential benchmarks for engineering education, which have since influenced broader educational frameworks in India. The adoption of the four-year undergraduate model across general education programmes reflects this alignment with global standards. This structure enables a comprehensive curriculum, integrating theoretical knowledge, practical skills, and research opportunities, and supports the development of globally competitive graduates. By aligning educational frameworks with international accreditation standards, India extends these benefits beyond engineering, promoting global recognition and opportunities for students across diverse fields of study.

POURYEA Curricular flexibility & students mobility are the key components of FYUGP introduced in Kerala, which focus more on student's learning outcomes

Higher Education Matters February 2025 20

Adhering to the principles of the Washington Accord engineering graduates ensures that meet international standards of quality and competency, enhancing their recognition and mobility across borders. This influence has extended beyond engineering to encompass general education programmes, now aligned with the four-year undergraduate model adopted by many countries worldwide. The four-year duration of these programmes facilitates comprehensive coverage of skill-based curriculum and core subject knowledge, integrating theoretical understanding, practical skills, and research opportunities. This alignment between educational structures and global accreditation standards benefits students of the general education on a global scale, extending beyond the engineering and other professional education in subsequent phases of implementation.

WHAT CHANGES ARE TO HAPPEN

- Significant changes in teaching, learning and evaluation methods
- More autonomy for teachers and departments
- 20% of syllabus by teacher/instructor in all courses
- Teachers can design new courses/papers
- Bridging the skill gap

Image Source:keralauniversity.ac.in

- Project/internship for all interested students
- Importance for Learning Outcome
- Flexibility for students for synthesizing their degrees as per their choice



- No more Main/Core & Sub/Complimentary
- Major & Minor Courses
- Major (min 50%), Minor (min 20%)
- Major (17/22courses + project), Minor (12 courses)
- Interdisciplinary Degree also available

From the traditional path, University of Kerala has started 23 UG programmes in the University Departments at Kariavattom campus in addition to the existing PG programmes . Similar steps have been taken by other universities.

Salient features of the Curriculum Framework

The Framework is formulated with a student centric approach and provides maximum flexibility in terms of choice of disciplines of study and it allow to move from one discipline of study to another.

- It has the **options for developing various academic pathways** by a creative combination of disciplines of study.
- The students are getting a chance to determine his/her own semester-wise academic load and will be allowed to learn at his/her pace, to the extent possible.
- Increase in the **number of choices of courses available to students** and the students are getting an opportunity to choose the courses of their interest from all disciplines.
- This Framework provides multidisciplinary and holistic education with emphasizes on research, skill development and higher order thinking,
- The frame work promote innovation and employability of the student.
- The frame work offers flexibility for the students to move from one institution to another as per their choice.
- The frame work offer the **flexibility to switch to alternative modes of learning** (offline, ODL, and online learning, and hybrid modes of learning).

Possible Programme pathway options available for the students

• Degree Major with Minor: This pathway is designed for students who wish to engage in an in-depth study of more than one discipline, focusing primarily on one (Major) while giving relatively less emphasis to another (Minor). A student enrolled in the FYUG Degree Programme can earn a Major degree in a specific discipline and be eligible for a Minor in another discipline of their choice by completing a minimum of 34 credits (approximately 25% of the total credits required for the three-year program) through 8-9 pathway courses in the chosen Minor discipline. It is important to note that the concept of a Minor applies only when a Major discipline is declared.

Eg. BSc Physics Major With Chemistry Minor/BSc Chemistry Major With English

Degree with single Major: This pathway is ideal for students seeking an in-depth focus on a single discipline without pursuing a structured minor. Students enrolled in the FYUG Degree programme within a specific discipline will be awarded a Major degree if they earn at least 50% of the total credits required for the degree in that discipline. The remaining credits can be obtained from the same discipline or through open elective courses from other disciplines, in addition of completing the required foundation papers.

Eg : BSc Physics Major/BA Economics Major /BCom Major

• Major with multiple disciplines of Study: This pathway is ideal for students aiming to develop core competencies across multiple disciplines. In this approach, the credits for the minor pathway are distributed among the selected disciplines or subjects. A student enrolled in the FYUG Degree Programme who earns a Major degree in a specific discipline is eligible to have their core competencies in other chosen disciplines recognized, provided they have completed a minimum of 12 credits from the pathway courses of each additional discipline.

Eg. BSc Physics Major with Chemistry and Mathematics, BA Economics Major with History and English, BCom Major with Economics and statistics.

Interdisciplinary Major: In this programme pathway, credits for both the major and minor components are distributed across the constituent disciplines or subjects, enabling students to develop core competencies within an interdisciplinary framework. For these programme pathways, the credits for the major and minor pathways shall be distributed among the constituent disciplines/subjects to attain core competence in the interdisciplinary programme.

Eg. BA Econometrics Major, BSc Computer Science Major

Multidisciplinary Major: For multidisciplinary Major pathways, the credits for the major and minor pathways will be distributed among the broad disciplines such as Life sciences, Physical Sciences, Mathematical and Computer Sciences, Data Analysis, Social Sciences, Humanities, etc.

Eg. BSc Life Science, BSc Data Science, BSc Nano Science, BSc Biotechnology

• Degree with Double Major: To earn a Double Major degree, a student must complete at least 50% of the credits in their primary major discipline and an additional 40% of the credits in a second discipline over the course of a 3-year or 4-year undergraduate program. Upon meeting these requirements, the student will be awarded a degree with a Double Major.

Eg. BSc Physics and Chemistry Major, BA Economics and History Major, BA Economics and History Major BCom Commerce and Management Major. Undergraduate studies should ideally serve as a foundation for developing broad intellectual skills and competencies that can be transferred and applied across diverse practical contexts.

The FYUGP emphasizes a transformative approach to education, shifting the focus from traditional classroom lectures to tutorial-based and activity-driven teaching methods. This approach promotes customized, experiential learning, enabling students to develop knowledge and skills through collaboration and shared competencies—critical in today's educational landscape. Reducing reliance on direct instruction can enhance student outcomes when paired with innovative and optimized learning environments. Additionally, personalized learning plans are essential, as modern learners increasingly access diverse resources such as media, the internet, and social networks, often finding conventional classroom-based teaching methods less relevant. By adopting these progressive strategies, students are better prepared to thrive in a rapidly changing world.

TRANSFORMING CAMPUSES

UNIVERSITY OF BERKELEY SETS AN EXAMPLE

Reserving prime parking for Nobel laureates symbolizes recognition, fostering academic excellence and campus pride.

This charming tradition at Berkeley began in 1980 when Polish poet Czeslaw Milosz, upon winning the Nobel Prize in Literature, playfully requested a permanent parking space on campus. His wish was granted, turning his bold request into a cherished tradition. Meanwhile, Harvard University proudly boasts a remarkable roster of over 150 Nobel laureates, cementing its reputation as a hub of academic excellence. Columbia, Cambridge, and Chicago also shine brightly, celebrating the prestige brought by their Nobelwinning scholars.

The practice of reserving prime parking spaces for Nobel laureates has since become an inspiring symbol of recognition on these campuses. Introducing such traditions to our own institutions could infuse them with a similar sense of magic, fostering more engaging and Photo by Global X, licensed under CC BY 2.0

dynamic learning environments. This story underscores the power of creative gestures in transforming campuses to promote quality and excellence. Recognizing and celebrating academic achievements, as Berkeley did for Czeslaw Milosz, can significantly elevate an institution's prestige and attractiveness. Establishing distinctive traditions fosters a strong sense of community and pride among students and faculty, enriching campus culture and creating a vibrant environment.

1-12

Offering incentives such as special privileges or public recognition can inspire faculty and students to pursue excellence. Prestigious institutions like Harvard, Columbia, Cambridge, and Chicago set an example by attracting top-tier talent, cultivating a stimulating academic ecosystem that benefits everyone.

Designating sought-after parking areas as priority zones for faculty, students, or others who achieve notable academic or professional milestones can serve as a meaningful way to honor excellence. Adopting such traditions not only celebrates achievements but also inspires future efforts, enhancing the vibrancy of learning environments and fostering personal and institutional growth.

Every Part Educates: A Campus as a Continuous Learning Ecosystem

Imagine a campus where every corner, structure, and landscape element becomes a dynamic classroom, seamlessly blending education with everyday experiences. Each building, through its design and materials, narrates a story of engineering ingenuity and sustainable practices. Picture a courtyard where the flora and fauna are curated to teach ecological principles, or a library that not only facilitates study but also showcases cutting-edge innovations in architecture and information sciences.

In this envisioned learning environment, every aspect of the campus is thoughtfully crafted to integrate scientific understanding and environmental stewardship. Hostels serve as models of energy-efficient living, pathways demonstrate principles of urban planning and accessibility, and the cafeteria becomes a hub for lessons in nutrition and sustainable food practices. Here, students, faculty, and visitors are immersed in an ecosystem where learning transcends traditional classrooms. The infrastructure itself fosters curiosity, engagement, and a deeper appreciation for interdisciplinary connections. This holistic approach inspires a lifelong commitment to sustainability, innovation, and real-world problem-solving.

In essence, this is not just a campus, but a living laboratory of ideas—where every element contributes to a transformative educational experience, preparing individuals to creatively and knowledgeably address the challenges of tomorrow.

Even the campus cafeteria serves as a center for nutrition education and a model of sustainable food practices



In recent years, Indian universities and campuses have significantly adopted practices aimed at enhancing their educational environments and meeting stringent ranking and accreditation criteria. A key aspect of this transformation is the emphasis on sustainability. Many institutions have implemented green building technologies, energy-efficient systems, and eco-friendly campus designs to reduce their environmental footprint.

Moreover, these campuses are now designed to highlight and utilize their resources as educational tools. From integrating renewable energy systems and water conservation measures to showcasing innovative architectural designs, every element of the campus serves a dual purpose: facilitating learning and demonstrating commitment to sustainable development. This holistic approach not only improves the campuses' rankings and accreditation but also enriches the academic experience by creating dynamic, real-world, hands-on, innovative, impactful, inclusive, and collaborative learning environments.



Curriculum & Credit Framework for Postgraduate Programmes



According to the UGC document, a one-year postgraduate programme requires 40 credits when preceded by a four-year undergraduate degree, whereas a two-year postgraduate programme requires 80 credits when preceded by a three-year undergraduate degree. Additionally, students may qualify for postgraduate programmes in any discipline, provided they fulfill the necessary prerequisites or successfully pass the relevant entrance examinations. The highlights of the UGC framework is presented here.

The framework emphasizes advanced coursework and practical experience, including options for vocational courses and internships to enhance employability and practical skill while supports simultaneous enrollment in multiple academic programmes, provided there is no overlap in class timings. Another important aspect is it Incorporates mechanisms for plagiarism checks and adherence to research integrity, ensuring the quality and originality of academic work.

POST GRADUATE CURRICULUM FRAMEWORK

SALIENT FEATURES

- Flexibility and Multiple Pathways: The framework allows for a flexible design of postgraduate (PG) programmes, accommodating different academic backgrounds and career aspirations
- Multiple entry and exit options: opportunities for students to switch subjects, pursue interdisciplinary studies, or follow specialized tracks within their fields
- Integration with NEP: promoting multidisciplinary education, flexible learning paths, and the creation of a national framework for higher education qualifications
- Incorporates the National Credit Framework (NCrF): facilitate the creditization of learning, ensuring that all learning and work experiences can be accumulated, transferred, and redeemed as academic credits.
- **Credit System and Eligibility**: specifies different credit requirements based on the type and duration of UG programmes completed.
- Curricular Components and Design: Three types of PG programmes: a one-year PG program, a two-year PG program, and a five-year integrated UG-PG program. Each type offers a combination of coursework and research tailored to the academic and professional needs of students.
- Graduate Attributes and Learning Outcomes: It specifies that PG qualifications should demonstrate advanced knowledge, problem-solving abilities, and research skills that are built upon UG studies.

Higher Education Matters February 2025 26

- Flexibility in Learning Modes: Students can opt for various learning modes, including offline, online, open and distance learning (ODL), or hybrid modes, making education accessible and flexible to meet diverse needs.
- Assessment and Quality Assurance: Emphasizes formative and continuous assessment over summative assessment to better reflect ongoing learning and development
- Credit Assignment for Work Experience: Introduces the concept of creditizing relevant work experience, allowing students to gain academic credits for professional skills and experiences obtained outside formal education
- Plagiarism and Research Integrity: The framework mandates robust mechanisms to detect plagiarism and ensure research integrity, reflecting a commitment to high standards of academic honesty and quality
- Grading and Evaluation: Detailed guidelines for calculating Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA), providing a standardized approach to evaluate student performance across different institutions.
- Support for Diverse Career Paths: It supports the development of a range of career skills, including entrepreneurship, employability, and professional competencies, making graduates ready for various roles in academia, industry, and beyond
- Acknowledgment of Lifelong Learning: Emphasizes the importance of lifelong learning and continuous professional development, recognizing that education should equip students with the skills to adapt and thrive in a rapidly changing world.

TYPES OF PROGRAMMES

- One-Year PG Programme: Suitable for students with a four-year undergraduate degree, this programme typically involves 40 credits, split between coursework and research.
- Two-Year PG Programme: Designed for students with a threeyear undergraduate degree, this programme requires 80 credits over four semesters. It provides flexibility to focus on coursework, research, or a combination of both.
- Integrated Five-Year UG-PG Programme: Combines undergraduate and postgraduate studies, requiring progressive accumulation of credits over ten semesters. This programme integrates comprehensive undergraduate coursework with advanced postgraduate studies.

IT ENCOURAGES STUDENTS TO PURSUE RESEARCH, INNOVATION, AND PRACTICAL PROJECTS THAT CONTRIBUTE TO SOCIETAL AND ECONOMIC DEVELOPMENT

> Kerala State Higher Education Council has initiated steps to revise PG curriculum in Kerala offering flexible options for 1year and 2-year postgraduate (PG) programmes, in line with

UGC guidelines and as a continuation of the FYUGP framework. Students will have the choice of pursuing a 1-year PG programme after completing a 4-year undergraduate degree, or a 2year PG programme for those with a 3-year undergraduate

degree. Additionally, it includes options for PG by Research and PG by Apprenticeship.

UGC Guidelines

UNDER GRADUATE INTERNSHIPS



The University Grants Commission (UGC) has issued Guidelines for Internships and Research Internships for Undergraduate Students, designed to improve employability and cultivate research skills among undergraduates. The framework and process for accessing the scheme are outlined here

University Grants Commission (UGC) has issued Guidelines for Internship/Research Internship for Undergraduate Students for improving employability and developing research aptitude among undergraduate students.

Internships are categorized into two types:

- Employability-Focused Internships: Designed to improve job readiness.
- Research-Focused Internships: Intended to develop research skills.

Higher Education Institutions (HEIs) are tasked with establishing a structured internship mechanism, including appointing a nodal officer and collaborating with local industries. Students are required to complete internships that contribute 2-4 credits to their UG degree, with research internships being mandatory for those pursuing a 4-year UG degree with research, contributing to 12 credits in the 8th semester.

Universities have set up incubation centres on their campuses to promote startup and entrepreneurship culture among the students. The institutions are also associating with industries and providing them space to set up Centres of Excellences on their campuses."

The Government of India highlights that approximately 400 Techno-Business Incubators (TBIs) have been established across colleges and universities. Furthermore, a partnership with the industries department has facilitated provisions for setting up industrial parks within campus premises, further bridging the gap between academia and industry.

The PM Internship Scheme 2024, launched by the Indian government, aims to provide graduates and postgraduates with practical experience in government departments and ministries. This programme offers opportunities for individuals interested in public administration, policymaking, and governance to gain firsthand exposure to government operations, contribute to research, and assist in policy development.

Roles and responsibilities for internship providers, nodal officers, supervisors, and mentors are clearly outlined to ensure effective guidance, evaluation, and certification. Internships are assessed through reports, presentations, and viva-voce, focusing on research, originality, and skill development. Higher Education Institutions must ensure compliance and may offer extra credits for fourth-year UG internships. Designed to enhance skills and deepen understanding of governance, the scheme also aspires to nurture future leaders by offering valuable insights into India's administrative processes while supporting national development initiatives.

The scheme began with a pilot project in the financial year 2024-25, aiming to offer 1.25 lakh internships across 24 sectors, including oil and gas, energy, travel, hospitality, automotive, banking, and financial services. Participating companies were chosen based on their corporate social responsibility (CSR) contributions over the past three years, ensuring interns are placed with organizations that uphold strong social and ethical standards.

According to recent reports on the PM Internship Scheme, there has been an overwhelming response, with approximately 6.21 lakh applications submitted for 1.27 lakh available positions. The central government has confirmed that the selection process is currently underway. Announced in the Union Budget for the 2024-25 financial year, the scheme aims to offer internship opportunities to one crore youth in the top 500 companies over a five-year period. As the pilot phase launched was to provide 1.25 lakh internship opportunities during 2024-25 itself, students can have the opportunity to utilise the scheme effectively.

Steps to register for the PM Internship Scheme 2024

- 1. Visit the official website: Go to www.pminternship.mca.gov.in.
- 2. Register: Click on the "Register Now" or "Youth Registration" button on the homepage.
- 3. Complete your profile: Fill in the required personal, educational, and professional details. (You will also need to upload necessary documents)
- 4. Apply for internships: Once your profile is created, a resume will be auto-generated. You can then apply for up to five internship opportunities based on your preferences.
- 5. Interns will receive a monthly stipend of ₹5,000 for a 12-month period and a one-time grant of ₹6,000 for incidental expenses.
- 6. The internship is designed to provide young professionals with valuable work experience across top Indian companies.





Higher Education Matters February 2025 29

SKILL EDUCATION

KERALA'S INITIATIVES

By incorporating skill development into the Four-Year Undergraduate Programme (FYUGP) and building partnerships with diverse institutions, Kerala is establishing a model for holistic education that highlights the importance of practical training in equipping students for successful careers.

In the rapidly evolving job market, skill education plays a pivotal role in enhancing employability and meeting industry demands. Recognizing this, the Government of Kerala has implemented a range of innovative initiatives aimed at strengthening vocational education and training (VET) within the state's higher education framework. These efforts focus on integrating practical skills into academic programmes, fostering industry collaboration, and preparing students for successful careers.

Kerala's Leadership

According to the India Skills Report 2024, Kerala has emerged as the top choice for employment among India's youth, with Kochi and Thiruvananthapuram ranking second and fourth, respectively, as preferred employment destinations nationwide. This recognition underscores the state's commitment to skill development and its success in aligning educational programmes with workforce needs. The Government of Kerala has prioritized Vocational Education and Training as a strategy to equip students with job-ready skills and support career progression.

The Government of Kerala recognizes the critical importance of Vocational Education and Training (VET) in equipping individuals with practical skills that enhance employability and cater to industry demands. These initiatives are aimed at following results:

- Enhances employability: VET provides individuals with skills that are directly applicable in the workforce.
- Meets industry demands: Aligns training with current job market needs.
- **Career progression**: Offers clear pathways for advancement in various sectors.

Kerala has introduced the four-year undergraduate programme (FYUGP) that incorporates skill education, practical experiences, on-the-job training, and research opportunities.

- **Comprehensive education**: Combines academic learning with vocational training.
- Skill education opportunities: Students engage in hands-on training relevant to their fields.

The state has developed a curriculum allowing students to design their own degrees, including options for vocational minors and internships.

- **Degree customization**: Students can tailor their educational experience.
- **Integration of internships**: Practical work experience is emphasized

The Government has established the Center for Skill Development Courses & Career Planning (CSDCCP) in all higher education institutions.

- Supportive infrastructure: Over 500 CSDCCP centers are operational.
- Collaboration with professional agencies: Works with recognized skilling agencies to enhance course offerings.
- Kerala State Higher Education Council (KSHEC) has empaneled KELTRON as implementation agency to act as CSDCCP for implementing Skill Development Courses under FYUG Programs in Arts & Science Colleges across the State of Kerala.

Higher Education Matters February 2025 30

CURRICULUM-SKILL

These programmes follow the National Skills Qualification Framework (NSQF) curriculum and offer dual certification from the National Council for Vocational Education & Training (NCVET) and Keltron. In line with UGC guidelines, the credits earned through these Skill Development courses can be applied toward Degree or Diploma programmes. Through these initiatives, Keltron's Industry-Institute-Interaction Cell, under the CSDCCP, aims to equip students with additional skills, enhancing their employability and preparing them as industry-ready professionals.

The KSHEC is responsible for identifying and recommending suitable agencies to provide operational support for the CSDCCP. It ensures quality training through collaboration with skilled streamlines organizations and processes to effectively implement vocational training programmes.

The CSDCCP will be supported by several key organizations, including ASAP Kerala, KELTRON, Institute of Human resource Development (IHRD), and the ICT Academy of Kerala.

- Diverse support base: Utilizes the expertise of multiple institutions to deliver quality training.
- Focus on technology and continuing education: Addresses current and future skill requirements.

CSDCCP will offer short-term joboriented courses based on the National Skill Qualification Framework (NSQF). NSQF alignment by ensuring courses meet national skill standards. Participants will receive sector-specific certificates upon completion.

Universities in Kerala will grant academic credits for NSQF-based certificate courses conducted through CSDCCP.

- Flexible credit system: Students can use these credits towards their degree requirements.
- Support for minor subjects: Credits can replace or supplement existing academic credits.

KSHEC is developing innovative courses in collaboration with industries and Sector Skill Councils suitable for undergraduate programmes.

- Industry consultation: Ensures relevance of courses to current job markets.
- Focus on employability: Prepares students for immediate employment opportunities.

Additional Skill Acquisition Programme (ASAP) Kerala has launched an innovative online portal and mobile application, "ASAP Career Link," designed to centralize employment information, including internships and job opportunities for students and job seekers in Kerala. This platform particularly focuses on finalyear engineering students, offering a unique system for securing internships that lead to job placements in various sectors, including public and multinational companies. With features such as a special login for job seekers and employers, real-time application tracking, AI-driven selection processes, and a centralized database for data security, the portal is accessible 24/7 and serves as a vital resource for both job seekers and employers.

(https://careerlink.asapkerala.gov.in).



PART - 1 KNOWLEDGE ECONOMY

'A knowledge society thrives on the creation, dissemination, and application of knowledge, driving social, economic, and cultural advancements. For a state to evolve into such a society, it must prioritize education, nurture innovation, support research, ensure free access to information, and cultivate an environment that encourages continuous learning and critical thinking'

Prof. Rajan Gurukkal offers a theoretical review

Knowledge Economy, much discussed these days, is topical and most of us have a fairly good idea about it as an economy that transforms the contemporary world. Acquisition of knowledge, the basic economic resource, is the critical economic process today. We talk about nations leapfrogging into it by ensuring preparedness to be globally competitive in innovative research. Still most of us are commonsensical about conceiving this economy and characterising it transformative. Scholars have been adding to the dubiousness by using the words 'knowledge' and 'information' as well as 'economy' and 'society' interchangeably and through coining new expressions like 'information society/economy' as corollary. Only a few critical political economists and social theorists have approached Knowledge Economy in the context of Capitalism. Drawing on the meaning and implications of the term economy as a system of production, consumption and exchange this article seeks to do a theoretical review of what the expression 'knowledge economy' connotes and how it operates.

Generally Knowledge Economy is taken for knowledge based society. Sometimes people call it Information Society too. Many writers use the terms 'economy' and 'society' as well as 'knowledge' and 'information' interchangeably.



Key words: Information, knowledge, post-industrial, post-capitalist, technocapitalism, science-tech hybrid areas, Patents, Intellectual Property, technomilitary imperialism.

Bibliographical Roadmap

Looking at various indications of the precedence of knowledge over material goods in the market, Daniel Bell was the first to detect the emergence of a society distinct for features like phasing out of manufacturing, rise of information-led serviceoriented economy, services, precedence of sciencebased industries; and the rise of a new managerial class of technical elites with a new principle of stratification (Daniel Bell, 1973). Diagnosing them as indications of the phasing out of the Industrial society he made a forecast of the onset of a post-industrial society pre-occupied with data/information for describing the empirical world, and knowledge as the competency to make judgments.

Ever since writers have been naming this transformed state as knowledge society or information society, more or less interchangeably, notwithstanding the ambivalence between knowledge and information. Manuel Castells, a Spanish sociologist, famed for studies in information society, put up his thesis of information economy as city economy, represented it as informational society (Manuel Castells, 1989). He characterised the city as the hub of information technology and the process of regional urbanisation.

P.F.Drucker introduced the concept of the Knowledge Society, argued that capitalism would eventually phase out, giving way to a post-capitalist society driven by knowledge. He played a key role in popularizing the terms 'Knowledge Society' and 'Knowledge Economy.

Andrew Feenberg interpreted Knowledge Economy as a new version of Capitalism, but it remained largely unheard for quite sometime (Andrew Feenberg, 1991). Another work of equal theoretical importance published in the same year but not seriously discussed despite its being directly on the political economy of information technology, was authored by Michael Perelman (Michael Perelman, 1991). Nevertheless, P.F. Drucker taking Capitalism as the point of reference named the Knowledge Society He was the first to put up the thesis of the phasing out of Capitalism and the onset of Knowledge Society as Post-capitalist Society (P.F. Drucker, 1993). His is a narrative of the surface features of the late 20th century society that depended on knowledge for its operation. Nevertheless, he was responsible for making the expressions 'Knowledge Society' and 'Knowledge Economy' popular.

Manuel Castells by the late 1990s recognised the post industrial economy an the one transcending the city-space, encompassing the whole world and becoming epochal. He made extensive analyses of the economy, society and culture of the Information Age in three volumes. In the first volume he deals with the rise of the Network Society on a global scale, highlighting the economic and social dynamics of the information age (Manuel Castells, 1996). The next volume focusing on the power and identity, deals with the dynamics of the global economy Manuel Castells, 1997). In the last volume he analyses the crises of the industrial society leading to its dissolution into the to the global network society and marking the end of the millennium (Manuel Castells, 1998).

Several scholars thought that the digital technologies were changing the capitalist world traumatically and fundamentally. It is important to remember here that Feenberg had Andrew convincingly distinguished it as Digital Age, but to identify it a distinct phase of Capitalism (Andrew Feenberg & Alastair Hannay eds. 1995; Thomas J. Misa, Philip Brey & Andrew Feenberg eds.2003; Andrew Feenberg & Darin Barney eds. 2004). Scholars vainly hoped that the emerging technologies would act as a catalyst for some drastic changes in the oppressed social world. Shattering the expectation that digital technology would ensure human well-being through free market economies, it only widened the wealth gap through the proliferation of billionaires. They seldom thought about how the ability to compress and store huge data of information in small devices would cause to end global poverty. Communication revolution could only deepen social divisions and undermine democracy. No technology would be socially good or bad in itself, but who uses it for what matters with respect to consequences. Only the dominant economy puts it to the most efficient use, the consequence of which would inevitably be inequality.

Negri and Michael Hardt anticipate Antonio technology to promote social production eventually upsetting the relations of production under Capitalism and to strengthen people's democracy causing the collapse of the former (Antonio Negri & Michael Hardt, 2000). Slavoj Zizek, a Slovanian cultural philosopher, Lacanian psycho-analyst and Communist also thought that the rise of 'cognitive work', the contradiction between social production and capitalist relations would become more intense than ever, rendering 'absolute democracy' plausible at the cost of Capitalism. Zizek in the theoretical perspective of critical political economy and culture had imagined the collapse of Capitalism as a result of the failure of Nation-State and rise of global solidarity and cooperation as an alternative, in the wake the COVID 19 pandemic (Slavoj Zizek, 2019). Although the world did seriously feel and seek alternatives to the liberal Nation-State during the days of of the major recession of 2008 first and later during the pandemic lock-down, in many States with centralised power could become more autocratic. After the pandemic the people who proved the possibility of an alternative governance and economy in the paradigm of cooperation miserably fell back to their Nation-States (Manuel Castells, 2017). Castells and his colleagues made this study based on the experience of Europe, USA, Canada and Australia during the recession of 2008.



Slavoj Zizek, a Slovanian cultural philosopher and Communist also thought that the rise of 'cognitive work', the contradiction between social production and capitalist relations would become more intense than ever, rendering 'absolute democracy' plausible at the cost of Capitalism.

Theoretical Question

In the academic sense knowledge is its explicit and implicit forms codified as amenable to communication and translation into uses, services and goods. It is not mere information or data. Information driven society is theoretically different from knowledgedriven economy. Information workers are not producing knowledge but generating, storing. processing, communicating, exchanging and consuming information or data by using digital technologies. What it demands the most is the tacit form of knowledge (skill), essential to operate digital technologies.

Arguably, Knowledge Economy has to be seen as the core of the knowledge-driven economy, the macro field of multiple enterprises of auxiliary nature. Economy Knowledge distinguishes knowledge from information. It uses knowledge as patentable intellectual property of enormous exchange value as a commodity by itself. As a potential basis for the production of other commodities it is capital too. Hence Knowledge Economy is capital-intensive and technology-intensive industrial production of marketable knowledge, presupposing precedence of innovation over discovery. It makes industry a knowledge-intensive establishment combining scientists, engineers and information workers at the work-place. Be it Information or Knowledge, the theoretical question is, whether either of them can be identified as a distinct mode of production intelligible in terms of means, relations and forces. Scholars who conceived Information or Knowledge Society as a substitute to Industrial Economy or Capitalism do not approach the problem theoretically. Those who remained theoretical in their analysis, conceived high technology under the forces of production and the relations thereof as the basis of social relations.

HANDS-ON-TRAINING OUTCOME BASED EDUCATION (OBE)

All Higher education Institutions in the country are advised to implement OBE in curriculum design and practice by stating the learning outcomes of programmes and their courses including the Graduate Attributes. A specially designed scheme of OBE by Prof. N.J. Rao is being offered through training/workshops by the Council. It includes, Blooms taxonomy, three-level Outcome scheme, assessment and evaluation methods, attainment of outcomes.

- Training for the Institutions and Faculty are being organised by the council.
- Handbook of OBE & Computation of Attainment published for Engineering and General Education programmes
- Handbook for Question bank for FYUGP under oBE scheme published



OUTCOME BASED EDUCATION GENERAL Prof. N.J. Rao

NERVILA STATE HIGHER EDUCATION COUNCIL 2023



Kerala State Higher Education Council Science and Technology Museum Campus, Vikas Bhavan P.O., Thiruvananthapuram-695033, Kerala State, India

www.kshec.kerala.gov.in



MULTI DISCIPLINARY ADAPTABILITY

It is over five decades and three years since the publication of Two Cultures by C.P. Snow (1959), a scientist and creative writer, famed for his series of novels known collectively as Strangers and Brothers, had lamented the gulf between scientists and creative writers. He deeply regretted the great cultural divide separating two great areas of human intellectual activity, "science" and "the arts." Snow argued that practitioners in both areas should build bridges, to further the progress of human knowledge and to benefit society. According to him, the breakdown of communication between sciences and humanities was a major hindrance to solving the world's problems.

This jamming communication persists everywhere but much more in our higher education institutions structured by Departments of disciplinary silos. At its core, the real problem has been the lack of knowledge across domains caused by the ostensibly unfamiliar technical language peculiar to each discipline. Today the gulf between the domains as well as disciplines is too huge to be bridged easily. Hence, the objective is not to try and keep abreast of academic advances in diverse disciplines by everybody, but to open up a disciplinary interface posing real life problems that no discipline can escape.

The KSHEC is organizing a series of workshops titled "Bridging Disciplines" to encourage collaboration among academic communities currently confined within silos. These workshops aim to facilitate interdisciplinary practices and foster communication across diverse fields of study.



Changes in the academic fields and the world around us compel the teachers to acquire multidisciplinary adaptability

Disciplines are being constrained to draw closer to one another and facilitate issue based crossdisciplinary communication. Accordingly, convergence research culture opening up interdisciplinary fields has been slowly bridging the disciplines.

However, forming part of the entrenched institutional structure of universities, these fields have become interdisciplinary Departments hardly different from other Departments lost in silos. C.P. Snow's reflections on the divide between science and the arts strongly today. The persistent resonate communication barriers within higher education hinder collaborative problem-solving. While interdisciplinary research is slowly emerging, entrenched departmental silos often inhibit genuine interaction, limiting our ability to tackle the complex challenges faced by society.
QUEST FOR RESEARCH JOURNALS

Empowering Researchers Through Better Access to Knowledge-National and State-Level Initiatives

Research journals play a critical role in advancing knowledge, fostering scholarly communication, and driving innovation across disciplines. However, the rising costs of journal subscriptions have created significant barriers to access, with fees controlled by a few dominant publishers. This financial burden limits access to vital research, hindering education, innovation, and collaboration, particularly in resource-limited settings.

To address these challenges, there has been a growing call for open-access publishing and pricing transparency. In response, the Government of India launched initiatives like INFLIBNET (Information and Library Network Centre) to provide digital academic resources, including research journals and theses, to support research and education. Initiatives like e-ShodhSindhu, sponsored by the government, aimed to reduce subscription costs by offering free access to international research journals and databases for Indian institutions. However, researchers have faced challenges such as limited access to full-text content, and over time, the availability of these resources has diminished, leaving many researchers struggling to access critical materials.

Recently, the Government of India declared the scheme 'One Nation One Subscription' (ONOS), set to launch in the beginning of 2025. This initiative aims to provide nationwide access to scholarly research articles and journals for over 6,300 government-managed institutions, covering 13,000 e-journals from 30 major international publishers.

E-JOURNAL CONSORTIUM

CURRICULUM-RESEARCH

In 2022, the Government of Kerala has set up a pioneering step in support of its research community

Considering the hardships faced by the research community in the absence of adequate access to research journals and its affordability, the Government of Kerala has introduced the 'e-Journal Consortium' scheme which provides access to highquality scientific and academic journals through a single portal called 'Knimbus'. This platform ensures access to internationally reputed publishers for the state's higher education institutions.

Currently, the initiative serves the research community across 16 universities in Kerala, tailored to meet the diverse requirements of different academic disciplines. Popular eresources like Science Direct and Scopus are included in this facility, catering to the specific needs of universities and their academic communities. The Kerala State Higher Education Council (KSHEC) serves as the implementing agency for this initiative, ensuring broad access to essential scholarly content.

PART - 1

OUTCOME BASED EDUCATION

Transforming Higher Education in Kerala: The Role of FYUGP and Outcome-Based Education

Kerala's higher education system is witnessing a paradigm shift with the introduction of the Four-Year Undergraduate Programme (FYUGP). This transformative initiative is designed to align higher education with the needs of 21st-century learners. The FYUGP provides a flexible and comprehensive curriculum that focuses on equipping students with the knowledge, skills, and competencies essential for thriving in their professional and personal lives. By integrating innovative teaching methods and leveraging modern technology, this programme aims to enhance the overall learning experience, making it more relevant, engaging, and impactful.

At the heart of this educational transformation lies the adoption of Outcome-Based Education (OBE), a progressive approach that redefines teaching, learning, and assessment. OBE shifts the focus from traditional input-based education, where the process of teaching is emphasized, to a results-oriented model where the emphasis is on what students are capable of achieving after completing their education. This approach reflects a global trend in education, emphasizing clarity, accountability, and measurable outcomes. Outcome-Based Education: A New Framework for Learning

Outcome-Based Education was introduced in the early 1990s by educational theorist William Spady, initially for the American school system. Over time, it gained prominence and was adopted by higher education systems worldwide. OBE is grounded in a learner- centric philosophy where every decision about curriculum design, instruction, and assessment is driven by the expected learning outcomes that students should achieve by the end of their educational journey. In OBE, learning outcomes are the cornerstone of the educational framework. These outcomes define what students are expected to know, understand, and demonstrate in terms of skills, knowledge, and competencies.

The integration of innovative teaching methods, coupled with the use of technology, enhances the learning experience, making it more engaging and relevant. They serve as clear and measurable goals that guide every aspect of the educational process. This model emphasizes not just theoretical knowledge but also practical and functional abilities that students need to succeed in real-world scenarios.

OBE operates on the principle that "the product defines the process." In other words, the desired results—or outcomes—dictate how the curriculum is designed, how teaching is conducted, and how learning is assessed. This results-oriented approach contrasts sharply with traditional methods, where the focus often remains on inputs, such as the curriculum content or hours of instruction, without adequately addressing the outcomes for learners.

Learning Outcomes: The Core of OBE

In the OBE framework, learning outcomes are the tangible results of education. They represent the functional abilities, attributes, and knowledge that students acquire through their learning experiences. These outcomes are specific, measurable, and achievable, providing a clear benchmark for students, educators, and institutions to evaluate the effectiveness of the educational process. Learning experiences in OBE are structured as units that can range from brief instructional activities to semesterlong courses or multi-year programmes. The outcomes at each level-whether a single unit. a course, or an entire program-are designed to contribute to the overarching goals of the curriculum. This hierarchical structure ensures coherence, allowing every component of the education system to work towards a unified purpose: producing graduates who are competent, skilled, and ready to tackle realworld challenges.

The Broader Impact of OBE on Higher Education

Adopting OBE is not just about redefining curriculum and assessment; it represents a comprehensive shift in how education is perceived and delivered. By focusing on outcomes, OBE ensures that students are not only knowledgeable but also skilled and competent. It emphasizes lifelong learning, encouraging students to continuously acquire and apply new knowledge, behaviors, and skills.

Moreover, OBE fosters a culture of accountability and clarity in education. By establishing clear goals and measurable outcomes, it provides a framework for productive interaction among all stakeholders, including students, educators, institutions, and employers.



Outcome based education does not interfere with the academic freedom of the teacher. It merely asks the teacher to follow a process in offering a course. Prof. N.J.Rao

This alignment between educational objectives and societal needs ensures that graduates are wellprepared to contribute meaningfully to their communities and the broader world.

Aligning Education with Global Standards

In today's interconnected world, higher education must align with global standards to remain relevant and effective. This requires a holistic approach that integrates curriculum design, instructional planning, and assessment methodologies, all centered around clearly defined outcomes.

Incorporating innovative teaching strategies alongside technology enriches the learning process, fostering greater engagement and relevance more applicable for experiential learning strategies OBE provides a robust framework for achieving this alignment, ensuring that every element of the education system contributes to the development of competent and capable graduates.

Kerala's Commitment to OBE

Since 2018, the Kerala State Higher Education Council (KSHEC) has been a driving force behind the adoption of Outcome-Based Education (OBE) in the state's universities and colleges. Recognizing the need to equip students with practical skills and competencies, KSHEC has implemented a range of initiatives to embed OBE principles into higher education. These efforts include work-based training programmes for university faculty and members of the Boards of Studies in affiliated colleges.

Under the guidance of Prof. N.J. Rao, a distinguished academic and former professor at the Indian Institute of Science, Bangalore, these programmes have addressed key elements of OBE, including course design, instructional strategies, and assessment methodologies. To facilitate the effective adoption of OBE, KSHEC has also developed and disseminated comprehensive guides and resources, offering practical insights into defining course outcomes, creating instructional activities, designing evaluation tools, and measuring learning outcomes.

Kerala's adoption of OBE underscores its commitment to creating a higher education system that prioritizes results, accountability, and realworld applicability. By fostering a culture of outcome-oriented learning, the state is enhancing the quality of education and ensuring that graduates are well-prepared to address the evolving challenges of the 21st century. These initiatives represent a transformative step toward a learner-centric, globally competitive education system.

There are several advantages to working with Outcome-Based Education.

- **Clarity:** An explicit statement of what the educational process aims to achieve clarifies the curriculum to both students and teachers and focuses on teaching and learning.
- **Provision of a Framework:** Outcome-based education provides a robust framework for integration of the curriculum.
- **Guide for Assessment:** The outcomes provide the framework for student examinations.
- Facilitates Curriculum Evaluation: The outcomes provide benchmarks against which the curriculum can be judged.

Advancing OBE Through FYUGP

The introduction of the Four-Year Undergraduate Programm (FYUGP) has further reinforced the importance of clearly defined learning outcomes. Each course within the programme is required to specify the competencies students are expected to achieve upon completion, ensuring alignment with real-world skills and knowledge.

To support this transition, KSHEC and universities across Kerala have organized extensive training for faculty members. These sessions focus on designing effective courses, planning instructional strategies, and developing activities that facilitate competency acquisition. Faculty members are also trained in constructing evaluation tools and methods to accurately measure the attainment of learning outcomes. (to be continued...)



CURRICULUM-QUALITY

STUDENT CENTRIC

A TRANSFORMATIVE Shift in Higher Learning



In recent years, student-centric education has become a transformative approach in higher education institutions across the globe. Moving away from traditional teaching models focused on content delivery and standardized assessments, this approach places the learner at the core of the educational process. It prioritizes individual learning styles, interests, and needs, creating a more personalized, engaging, and effective learning environment.

Primary elements

Personalized Learning Paths:

One of the defining characteristics of studentcentric education is its emphasis on tailoring learning experiences. Recognizing that each student learns differently, educators adapt teaching methods and materials to align with individual strengths and preferences. This approach encourages deeper engagement with the material and fosters a sense of ownership in students, empowering them to take control of their learning journey.

Active Participation:

Student-centric classrooms prioritize active participation, encouraging learners to engage in discussions, pose questions, collaborate with peers, and pursue independent inquiries. This active engagement promotes critical thinking, problemsolving, and analytical skills, leading to a more profound understanding of the subject matter and better preparation for real-world challenges.

Flexible Learning Environments:

Modern educational institutions increasingly integrate blended learning models, combining face-to-face teaching with digital resources. This flexibility accommodates diverse learning styles and enables students to learn at their own pace and convenience, making education more inclusive and accessible. Such adaptability is particularly beneficial in the rapidly evolving landscape of virtual and hybrid learning.

Feedback-Driven Growth:

Feedback plays a crucial role in student-centric education, shifting the emphasis from summative assessments, like traditional exams, to formative evaluations. Educators provide timely and constructive feedback, enabling students to track their progress and identify areas for improvement. This continuous feedback loop supports the idea of learning as an ongoing process rather than a final result.



The advantages of adopting a student-centric approach are vast. Tailoring educational experiences to individual needs enhances motivation and engagement, helping students retain knowledge and develop a deeper understanding of complex concepts. This approach also fosters essential skills such as collaboration, critical thinking, and adaptability, preparing students to navigate the challenges of a dynamic job market. By promoting active involvement and personalized learning, this model nurtures a sense of responsibility and independence in students, equipping them with the tools to thrive in both academic and professional environments.

Alignment with OBE

Student-centric education naturally aligns with Outcome-Based Education (OBE), a framework that focuses on achieving clearly defined learning outcomes. OBE shifts the emphasis from what is taught to what students learn and accomplish. It integrates well with a student-centric approach by prioritizing the development of skills, knowledge, and competencies needed for real-world success.

This alignment requires significant changes to traditional teaching practices, including redefining syllabi, adopting innovative instructional methods, and rethinking assessment strategies. These adjustments focus on achieving meaningful results and aligning education with the needs of modern learners.

A Holistic Approach to Learning

The student-centric model emphasizes interdisciplinary and project-based learning, linking the curriculum to students' interests and real-world applications. Assessment serves as both a tool for evaluating knowledge and a means of fostering personal growth through meaningful

feedback. Personalized learning plans cater to individual needs, enhancing the overall educational experience. This adaptability has proven particularly valuable during the transition to virtual learning environments, ensuring students remain engaged and supported in their education. As higher education continues to evolve, the shift toward student-centric education represents a pivotal step in creating learning environments that are inclusive, engaging, and responsive.

By placing learners at the center, this approach not only improves the quality of education but also equips students with the skills and confidence to excel in an increasingly complex world.

TAPPING THE NEURO DIVERSITY POTENTIAL

Neurodiversity encompasses the natural variations in brain function and cognitive styles, including conditions such as autism, ADHD, and dyslexia. In industries like technology and beyond, neurodiversity is embraced through inclusive hiring practices, tailored onboarding processes, and workplace accommodations like flexible schedules, quiet workspaces, and specialized tools. This inclusive approach recognizes the unique strengths of neurodivergent individuals, fostering innovation and boosting productivity. In recent years, businesses across various sectors have increasingly acknowledged the exceptional abilities of neurodivergent individuals, particularly those with autism, who thrive in roles requiring precision, pattern recognition, and problem-solving expertise. A notable leader in this movement is EY (Ernst & amp; Young) Global Limited), which has been championing neurodiversity through its globally recognized Neuro-Diverse Centers of Excellence (NCoE), setting a benchmark for creating inclusive work environments.

Neurodiversity Higher Embracing in Education and the Workplace Fostering Inclusive Learning Environments in Higher Education Higher education is increasingly prioritizing neurodiversity by creating inclusive learning environments that cater to the unique needs of neurodivergent students. Universities worldwide are implementing tailored support systems, including flexible learning plans, assistive technologies, and dedicated counseling services. Faculty training on neurodiversity awareness and the establishment of sensory-friendly spaces further enhance these students, academic and social experiences, enabling them to thrive.

EY's Global Expansion of Neurodiversity Initiatives

EY (Ernst & Young Global Limited), a multinational leader, has significantly advanced its neurodiversity efforts through the establishment of its Neuro-Diverse Centers of Excellence (NCoE). Launched in 2016, this ground breaking programme now operates in countries such as the UK, India, Canada, and Spain. Originally focused on technology roles, EY has recently broadened initiatives industries its to like pharmaceuticals and retail, leveraging neurodivergent strengths in fields such as data analytics, cybersecurity, and artificial intelligence.

Innovative Practices for Workplace Inclusion. To foster inclusivity, EY has introduced performance-based hiring tools, tailored onboarding processes, and sensoryfriendly accommodations, including noisecanceling devices and flexible work schedules. These initiatives are designed to empower neurodivergent employees to excel, fostering innovation and enhancing problem-solving capabilities across various sectors. 11

43

Setting the Benchmark for the Future EY's efforts underscore the growing recognition of neurodiversity as a vital component in building inclusive, creative, and forward-thinking workplaces. By championing innovative practices, EY sets a powerful example for organizations worldwide to value and harness the unique talents of neurodivergent individuals.

SAAC

Kerala State Higher Education Council

State Assessment & Accreditation Centre

Ensuring Quality Standards Through Continuous Evaluation of State HEIs

First State in the country to establish a state-level accreditation center similar to NAAC for assessing and grading HE institutions with state specific criteria



Open Doors to New Opportunities -Apply for Accreditation Now and Enhance Your Institution's Excellence! https://kshec.org/saac.php

- Preparatory Framework for NAAC & NIRF
- Implementation of PATH, Mentor-Mentee initiatives, and Institutional
- Development Plans (IDP) Programmes in HEIs
- Customized Institutional Development Plans (IDPs)
- Enhanced Institutional Quality and Visibility
- Establishing State-Level Quality Assurance Bodies
- Focused Assessment for Self-Financing Institutions
- 🔤 Inclusion of State-Specific Criteria

CURRICULUM-PEDAGOGY

INNOVATIVE PEDAGOGY

EMBRACING INNOVATION: TRANSFORMING CLASSROOMS FOR MODERN LEARNING

The concept of disruptive technology has transformed nearly every sector, and education is no exception. Traditional teaching and learning methods, once the cornerstone of education, have been significantly impacted. The conventional classroom model of a 'knowledgeable person speaks to a captive audience' has given way to innovative approaches that reshape how education is delivered and experienced with active participation of students.

Traditional Classrooms to Active Learning Environments

Research in educational psychology and cognitive science highlights the limitations of sustained attention. Studies suggest that students' focus declines after 10 to 20 minutes of continuous instruction. This insight has led to the adoption of strategies such as active learning, where lectures are interspersed with discussions, activities, or problem-solving tasks to maintain engagement. Implementing innovative tools and strategies is essential to engage Gen X students in the classroom. Traditional classroom setups have been replaced by smart, modern classrooms that promote active learning and collaborative group activities. Various teaching and learning approaches ensure that the process stays aligned with current and future advancements. Methods such as experiential learning, inquiry-based learning, case-based instruction, problem-based learning, and individual or group project-based learning promote active engagement. Techniques like discovery learning, practical work, and the integration of advanced technology, including digital and e-learning tools, online platforms, and methods, further enhance the teaching, learning, and assessment process. Field-based learning and visits to industrial or research facilities support deduction-based learning. These pedagogies emphasize constructive learning, fostering active learner participation, and meet the demands of a 21st-century learning environment.

Image Soui

The University Grants Commission (UGC) Guidelines on Innovative Pedagogical Approaches and Evaluation Reforms highlight teaching methodologies that foster constructive learning and actively involve learners in their educational journey

Various innovative pedagogies emphasize active, experiential, and technology-driven learning methods, fostering critical thinking, creativity, and holistic development while equipping students with essential 21st-century skills

(i) Flipped classroom pedagogy: It is an innovative pedagogical approach based on the constructivist school of thought. It is based on the blended form of learning with an emphasis on the 21st Century skills such as Creating, Evaluating and Analysing in the form of activity-based learning in the classroom wherein the interaction between student and teacher takes place in a flexible learning environment and culture.

(ii) Art Integrated Learning Pedagogy: It is a joyful and experiential learning pedagogy. It is about identifying the needs and potential of the learners and nourishing them to provide holistic growth. The students actively participate in the process of learning wherein they explore, develop and express their understanding and creative output using various arts forms and makes connections across curricula.

(iii) Project-based Learning Pedagogy: It is pedagogy of reflective practice and collaboration wherein students connect the concepts with reallife situations so that it could promote lifelong learning and 21st-Century skills using an online platform for engagement of learners.

(iv) Cutting Edge Pedagogy: It is pedagogy of learning with innovation and problem solving skills, wherein students are engaged using Technology. The diverse needs of the learners are catered to using digital and technological platforms such as pear deck for interactive online/digital learning

(v) Critical Pedagogical Approach: This approach emphasizes enhancing the learners' critical thinking skills by raising questions such as what they are learning and why they are learning, problem posing, and letting the students discover the answers. Learners acquire knowledge by investigation.



Kolb's Experiential Learning Theory (ELT)

Kolb's Learning Theory, also known as Kolb's Experiential Learning Theory (ELT), is a well-known educational framework that emphasizes learning through experience. Developed by David A. Kolb in 1984, the theory outlines how individuals learn by undergoing a cycle of experiences, reflections, conceptualizations, and experimentation. Kolb identified four stages in this learning cycle:

- **1.Concrete Experience (CE):** This stage involves having a direct experience or engaging in a new activity. It is the "doing" phase of learning, where individuals actively experience something.
- 2. **Reflective Observation (RO):** After the experience, learners reflect on what happened. In this phase, they think about their experience, observing from different perspectives.
- 3.Abstract Conceptualization (AC): In this phase, learners begin to draw conclusions or form theories based on their reflections. They make sense of what happened and develop general concepts or principles from their experience.
- 4. Active Experimentation (AE): In this final phase, learners apply what they've learned by testing theories or concepts in new situations. This "trying out" process helps refine their understanding and continue the learning cycle.

'Learning is the process whereby knowledge is created (knowledge production) through the transformation of experience' -David A. Kolb

KERALA'S COMMITMENT TO QUALITY

CENTRES OF EXCELLENCE

The **Government of Kerala** aims to establish Centres of Excellence (CoEs) to drive productive research in fields with high future demand. This initiative strategically creates an ideal institutional environment to ensure maximum productivity and excellence in advanced research areas. Key priorities for CoEs include securing sustainable funding, upgrading research infrastructure, and mobilizing talent in critical areas of cutting-edge research. Establishing these CoEs positions Kerala to achieve globally benchmarked research standards, promote innovations in sustainable technology, and foster equitable social development.

Capital-intensive research establishments are driving new science-tech hybrid fields with immense potential, including genomics, biotechnology, bioinformatics, nanotechnology, robotics, brain-computer interfaces, astrophysics, and aeronautical engineering. Centres of Excellence (CoEs) in Neurobiology and Cognitive Computing are vital, focusing on areas like the nervous system, digital transformation, machine learning, and augmented reality. The "One Health" approach, highlighting the link between human and environmental health, has unique relevance in Kerala, given its biodiversity-rich Western Ghats. CoEs in geoscience, climate resilience, and disaster management are critical, considering the region's vulnerability to meteorological changes.

Imaging Science and Technology (IST) also warrants a dedicated CoE for its broad applications across education, industry, and defense. IST encompasses various subfields, such as image processing, 3D graphics, remote sensing, and medical imaging, crucial for disciplines like microbiology, biophysics, and neurobiology. Furthermore, IST's integration with AI, augmented reality, and wearable tech enhances the accessibility of advanced imaging across multiple domains, offering transformative solutions in science, medicine, and beyond.

A Centre of Excellence

(CoE) is an autonomous institution of advanced research in one of the leading-edge areas of specialisation, run by a team of highly-motivated experts engaged in the production, application and publication of new knowledge. It is a physical Centre of infrastructural capacity and resources to enable heavily collaborative research across disciplines and focused on latent issues of local relevance but internationally challenging



1. Centre for Indigenous People's Education (CIPE)

The Centre for Indigenous People's Education (CIPE) is envisioned as a transformative educational institution in the Wayanad district of Kerala, dedicated to addressing the unique educational, cultural, and socioeconomic needs of the indigenous communities residing in the region. Wayanad, home to several tribal groups such as the Paniya, Kurichya, Kattunaikka, and Adiya, has a rich cultural heritage, but the region's indigenous populations face significant challenges in accessing quality education that respects their language, traditions, and worldview. CIPE aims to bridge this gap, empowering these communities through education that is not only inclusive but also culturally relevant.

2.Kerala Language Network (KLN)

The Kerala Language Network aims to establish a "Centre of Excellence for Languages" that will serve as a hub for promoting linguistic diversity, research, education, and cultural integration in Kerala. The center will focus on enhancing the teaching and learning of Kerala's regional languages, as well as other Indian and global languages, through innovative methods, state-of-the-art technologies, and interdisciplinary research. The project envisions positioning Kerala as a leader in

linguistic excellence, fostering multilingualism, and preserving the state's cultural heritage. This DPR outlines the objectives, scope, implementation strategy, and financials of the centre.

3. Kerala Institute for Science, Technology, and Innovation (KISTI)

To establish Kerala Institute for Science, Technology, and Innovation (KISTI) as an autonomous centre of excellence (COE) under the department of higher education with the intention of improving the quality of research ecosystem and knowledge management in the area of advanced scientific research and technology development. This proposed COE shall focuses on science and technology study, research or practice. It is to be designed to be as a hub of expertise, innovation and collaboration within that specific area. This CoE will bring together faculty members, researchers, students and industry partners to advanced knowledge, develop cutting edge research, provides specialized education and training and contribute the overall academic and professional activity of the state.

4. Teaching, Learning, and Training (TLT)

The Centre of Excellence in Teaching, Learning, and Training (TLT) aims to transform and elevate the quality of higher education by providing cutting-edge pedagogical training and capacitybuilding initiatives for faculty, staff, and students. This centre will act as a hub for innovation in teaching methodologies, researchbased learning, and technological integration into education.

5. Kerala Institute of Advanced Studies (KIAS)– A Centre of excellence for advanced research in social science and humanities

To establish Kerala Institute of Advanced studies (KIAS) as an autonomous center of excellence With the aim of forging new directions to scholarship in social sciences, humanities, languages and arts. It is to be designed to be as a hub of expertise, innovation and collaboration within that specific area. This CoE will bring together faculty members, researchers, students and industry partners to advanced knowledge, develop cutting edge research, provides specialized education and training and contribute the overall academic and professional activity of the state.

6. Kerala Network for Research-Support in Higher Education – (KNRSHE)

This centre is to handhold and assist teachers and researchers, particularly in colleges, to keep the momentum of fund-writing encourage them to mobilise research funds from various agencies including private sources for creating research infrastructure and to support them to conduct research. Assist the researchers with grant for research equipment maintenance. To promote networking among different grantee agencies at local levels and to avoid duplication of research infrastructure (RI), a consortium mode of approach with academia, research institutes, nongovernment organizations, S&T councils and industries belonging to the same domain that lie in various location (with in one or two districts) on mutually agreeable terms of conditions. It also envision to establish central instrumentation and academic computational facilities for the benefit of the researchers of the State.

7. Kerala Institute for Gender Equality (KIGE)

The Kerala Institute for Gender Equality (KIGE) is envisioned as an institute working to make gender equality a reality in the country and beyond. For this, it provides research, data and good practices. Its ultimate goal of this in statute is to redress inequalities in policies, services and public interventions. To put this into practice, KIGE will create a platform on gender mainstreaming with step-by-step guidance. Gender mainstreaming involves applying a gender equality perspective in each phase of the policy-making cycle as well as all areas within policies and processes such as procurement or budgeting. It will Share its knowledge and online resources and supports created through active research to the state institutions, to other states in our country and stakeholders from many different fields in their efforts to address gender inequalities in India and beyond.

University Linkages and Centres of Excellence

The Kerala State Higher Education Council has issued the guidelines on behalf of the Government of Kerala for establishing Centres of Excellence in Kerala. This document consists of the concept note, recommendations, guidelines and a draft of the Memorandum of Understanding (MoU). According to this report, a Centre of Excellence (CoE) is an autonomous institution of advanced research in one of the leading-edge areas of specialisation, run by a team of highly-motivated experts engaged in the production, application and publication of new knowledge. It is a physical Centre of infrastructural capacity and resources to enable heavily collaborative research across disciplines and focused on latent issues of local relevance but internationally challenging.

Normally, a centre deserves to be recognised as centre of excellence for the infrastructural capacity, research competency, and production of strikingly fresh knowledge accrued over a period of time. Nevertheless, the CoE conceived here is a centre of excellence built at once with the necessary infrastructure, economic resources, institutional network and academic capacity to leapfrog into research at the cutting edge.

CoE Scheme of the Government envisages establishing them fresh and independent of the University and the conversion of existing institutions is not the priority. Nevertheless, centres of exceptional potential deserve consideration for upgrading. Hence, it is necessary to simultaneously ascertain the possibilities of upgrading some of the existing Departments of Excellence and Inter-University centres as part of the university or in the university campus.

Although the mode of operation of the CoEs shall be independent of universities, it hardly precludes the inevitable two-way links between them. CoEs shall have an umbilical linkage with any Universities in the State, the country and abroad, sustaining a strong relationship of academic exchange, research collaboration, expertise sharing, and reciprocal recognition for mutual benefits. This shall be facilitating the circulation of brains and horizontal mobility of talent/laboratory skills between universities and CoEs. There are six such centres have been recommended by the Council and the Governemnt have permitted these centres to fucntion

- 1. Centre of Excellence in Ayurvedic Research, Manuscript Museum, Medicinal Plants Garden, Kannur, Kannur.
- 2. Centre of Excellence School of Mathematics, Kozhikode.
- 3. Thanu Padmanabhan Center of Excellence in Astronomy and Astrophysics at Kerala University Campus.
- 4. Centre of Excellence in Neurodegeneration and Brain Health at Kochi University of Science and Technology (CUSAT).
- Centre of Excellence in One Health, Biodiversity and Human-Wild Zoonotic Diseases at Wayanad Kerala Veterinary and Animal Science University. Life Western Guards Interface
- 6. Centre of Excellence in Nano Science and Nano Technology at Mahatma Gandhi University.

KAIRALI RESEARCH AWARDS

The Government of Kerala has introduced various categories of Kairali Research Awards to recognize and encourage outstanding Keralite research scholars and educators, both within the state and abroad, who have made remarkable contributions in their respective fields.

The selection committee for these awards is headed by Dr. P. Balaram, Former Director, Indian Institute of Sciences, Bengaluru and consists of members of international repute. The Kerala State Higher Education Council has been designated as the secretariat for the Kairali Research Awards and issues an annual notification announcing the call for applications and nominations for each category. The three categories of awards include Lifetime Achievement Prize, Gaveshana Puraskaram and Gaveshaka Puraskaram. The subject areas include Arts and Humanities, Chemical Sciences, **Biological Sciences**, Physical Sciences, Social Sciences.

The Kairali Research awards include several prestigious honors aimed at recognizing outstanding contributions in various academic disciplines.

- 1. GaveshakaPuraskaram:Theseawardsarepresented in multiple categories, offeringoneaward each in five domains such as ArtsandHumanities,BiologicalSciences,ChemicalSciences, Physical Sciences and Social Sciences.
- 2. Gaveshana Puraskaram: The award acknowledges exemplary research across the same diverse fields and are given to the regular faculty members of academic institutions for pursuing innovative research in the respective fields.

Kairali Awards programm offers significant financial incentives to honor and recognize exceptional achievements in various fields. The Gaveshaka Puraskaram award is valued at ₹5,00,000, celebrating notable contributions in five specific disciplines. The Gaveshana Puraskaram, a more substantial award. provides ₹25,00,000 to acknowledge groundbreaking research across academic fields. The support up to 24 lakhs to carry out such research project proposed by them.

Additionally, the Kairali Lifetime Achievement Award includes a prize of ₹2,50,000, aimed at honoring distinguished researchers within Kerala for their lifetime contributions. For Kerala-origin scholars who have excelled on a national or international stage, the Kairali Global Lifetime Achievement Award comes with a prize of ₹5,00,000, recognizing their impact and commitment to advancing knowledge beyond regional boundaries. Each year, the KSHEC announces the selection process by inviting applications from the first two categories and seeking nominations for the lifetime achievement awards..

3. Kairali Lifetime Achievement Award is divided into three distinguished categories:

- 1. The Kairali Lifetime Achievement Prize for Researchers is awarded to scholars from institutions within Kerala who have made significant contributions in Sciences, Social Sciences, Arts, and Humanities.
- 2. The Kairali Global Lifetime Achievement Prize for Researchers (within India) honours Keralaorigin scholars based within India who have demonstrated exceptional academic impact across these fields.
- 3. The Kairali Global Lifetime Achievement Prize for Researchers (Abroad) recognizes Keralaorigin scholars working internationally for their notable contributions to Sciences, Social Sciences, Arts, and Humanities. The Global Lifetime Achievement Prize is given on alternate years to the Keralite scholars from India and abroad.

KAIRALI AWARDS-RECEIPIENTS 2024

Kairali Global Lifetime Achievement Prize for Researchers (within India)



Arts & Humanities Prof. Chathanath Achuthanunni

A polyglot, Malayalam language writer and translator from Kerala, India. Received many awards including Kerala Sahitya Akademi Award for Overall Contributions (2011) Kerala Sahitya Akademie Award (1987) and Sahridayavedi Award (1988). In 2022 he received the Sahitya Akademi Translation Prize, a literary honour in India, presented by Sahitya Akademi, India's National Academy of Letters. Professor in the Malayalam department of the University of Calicut for long period and also served as visiting professor at Kerala Kalamandalam



Prof. P.P. Divakaran

Prof. Divakaran worked as a Professor and Researcher in Tata Institute of Fundamental Research (Theory Group) for long period. His main academic interest has been the critical study of the mathematical culture of India in all its aspects and over its long and unbroken history. He has spent time in several institutions of learning and research during this period and was also supported by a Senior Award of the Homi Bhabha Fellowships Council. He has written several books including "The Mathematics of India: Concepts, Methods, Connections"



Social Science

Prof. K. P. Mohanan

Former professor at IISER Pune. PhD from Massachusetts institute of Technology in 1982, and taught at MIT, University of Texas at Austin, Stanford, and the National University of Singapore, before returning to India in 2011. He has made significant contributions to linguistic theory in the areas of phonology, syntax, and morphology. His academic interests go beyond linguistics to include scientific inquiry and the nature of academic knowledge and rational inquiry in general, against the broader backdrop of human beliefs.

Kairali Global Lifetime Achievement Prize for Researchers (Institutions within Kerala)



Arts & Humanities

Prof. B. Rajeevan

An eminent writer, literary critic and a professor of Malayalam in various government colleges in Kerala. The primary focus of his work revolves around aesthetics, political philosophy, history, cinema & literature. He has authored nine books and his thought-provoking essays have been included in many anthologies and other notable publications. The primary focus of his work revolves around aesthetics, political philosophy, history, cinema & literature



Prof. K.L. Sebastian

A professor of chemistry at Indian Institute of Technology, Palakkad, and prestigious institutions in the country. In the beginning he joined in the Calicut University as Reader and Lecturer and later with Cochin University of Science and Technology and the Indian Institute of Science Bangalore. One of the leading theoretical chemists of India working on the applications of quantum mechanics and statistical mechanics in chemistry and chemical physics



Social Science

Prof. Kesavan Veluthat

An Indian historian and academic from Kerala specializing in medieval south Indian history. He is also an epigraphist and knows languages such as Sanskrit, Tamil, Kannada and Malayalam. Prof. Veluthat started his career as a Kerala government service college teacher in 1975 and later moved to the newly formed Mangalore University and to Delhi University. He obtained various awards and recognitions in India and abroad.

KAIRALI AWARDS-RECEIPIENTS 2024

Kairali Gaveshana Puraskaram



Arts & Humanities

Dr. Rakesh R

Dr. Rakesh R. is currently working as Assistant Professor in Mar Ivanios College, Thiruvananthapuram. His primary area of research is the cricketing cultures of South Asia. Project Title: Cricketing Celebrity and Mediated Indianness, 1952-2024: The Changing Intersections of Nation, Market, and (Transnational) Fame



Social Science

Dr. Sangeetha K. Prathap

Dr. Sangeetha K. Prathap is currently working as Assistant Professor specialised in the area of Entrepreneurship and Banking & Finance. She also teaches Business Environment School of Management Studies, Cochin University of Science and Technology (CUSAT) Kochi. Project Title: Financial sustainability of cooperative banks and financial resilience of community: Exploring the role of cooperatives in Kerala Economy



Biological Science

Dr.T. S. Preetha

Dr. T.S.Preetha is is currently working as Associate Professor in University College, Thiruvananthapuram. **Project** Title:Establishment of a microcloning system for the conservation and sustainable utilization of Curcuma vamana M. Sabu & Mangaly: a Redlisted endemic species in Southern Western Ghats

Southern Western Ghats of Kerala for subsequent exploration of novel bioactive compounds



Chemical Science

Dr. Anas S.

Dr. Anas S. is currently working as Associate Professor, School of Chemical Sciences, Mahatma Gandhi University, Kottayam. Project Title: Developing novel reusable Iron catalysts for Sustainable Chemical Processes. He works on Synthetic Organic Chemistry, Transition metal catalyzed reactions, Asymmetric synthesis, Design, synthesis and studies of functionalized polymers



Physical Science

Dr. Subodh G.

Dr. Subodh G. is currently working as Assistant Professor, Department of Physics, University of Kerala, Thiruvananthapuram. His Research areas include Electromagnetic interference shielding materials, Microwave ceramics, Polymer ceramic composites, Cold sintering process, Microwave antennas. Project Title: Development of Cold Sintered Magnetodielectric Antennas for NaVIC Systems

Kairali Gaveshaka Puraskaram



Biological Science

Dr. Sameera Shamsudheen

Dr. Sameera is a Senior Researcher in Cochin University of Science and Technology (CUSAT) Kochi. **Project Title**: Identification of species substitution in fish and fishery products traded at Kerala State: A genomic approach based on DNA barcodes



Physical Science



A researcher attached with the Department of Mathematics, at the Department of Mathematics Sri. C. Achutha Menon Government College, Kuttanellur. **Project Title:**Optimization on Nanofluidic Transport Phenomena: A Biomedical Perspective Involving Machine Learning

UNIVERSITY UPDATES

University of Kerala

- **Rising International Applications:** The University has witnessed a remarkable 63% increase in international student applications for the 2024-25 academic year, receiving 2,600 applications from 64 countries. This surge highlights the University's growing reputation as a global education destination. Starting from the 2024-25 academic year, the University Centres and affiliated colleges have also introduced FYUG programmes to expand academic offerings.
- Global Sustainability Ranking: University of Kerala has achieved a prestigious distinction in the QS (Quacquarelli Symonds) World Universities Sustainability Rankings 2025, a global system that measures the level of sustainability in tune with Sustainable Development Goals of higher education institutions at the international level. The University is placed in the 1181-1200 band globally, 395th in Asia, and 48th among Indian institutions.
- **Major Infrastructure Projects:** In October 2024, Chief Minister Pinarayi Vijayan inaugurated two major infrastructure projects at the university's Kariavattom campus: a regenerative medicine and stem cell laboratory, and new hostels for students. These projects aim to enhance research capabilities and improve student accommodation facilities.

Kerala University of Digital Sciences, Innovation and Technology

- **Collaboration with Alan Turing Institute**: In July 2024, DUK signed a Memorandum of Understanding with the Alan Turing Institute, affiliated with the University of Edinburgh, to establish a Centre for Artificial Intelligence at the Digital Science Park in Thiruvananthapuram. This partnership focuses on advancing AI research, particularly in areas like generative AI, AI hardware, and robotics
- Introduction of 'Kairali' AI Chip: Propelling Kerala's foray into exciting emergent technologies, Digital University Kerala has designed the State's first silicon-proven artificial intelligence (AI) chip-Kairali Al Chip in January 2024. It is Kerala's first silicon-proven artificial intelligence chip. Designed by the university's School of Electronic Systems and Automation, this chip is expected to have applications across various sectors, including agriculture, aerospace, mobile technology, and security. It is touted to contribute its edge intelligence for edge ATI) in a wide array of areas Including agriculture, aerospace, mobile phone and automobile Industries, drones and security
- Establishment of the Digital Science Park: DUK is playing a pivotal role in the development of India's first Digital Science Park in Thiruvananthapuram. The foundation stone was laid in April 2023, and the park is expected to be completed by 2026. It aims to support industries and startups in areas like robotics, artificial intelligence, and sustainable materials

Mahatma Gandhi University

- **Consistent Global Recognition:** For the third consecutive year, MGU has secured a position in the Times Higher Education World University Rankings, sharing the second spot among Indian universities with Anna University and Jamia Millia Islamia University. This achievement reflects MGU's sustained commitment to academic and research excellence.
- Academic Collaboration: Mahatma Gandhi University, Kottayam, will enter into an agreement on academic collaboration with Yildirim Beyazit University (AYBU) in Ankara, Turkey.
- Online MBA programme: MG University is now offering an online MBA degree equivalent to the regular course. Students can opt for electives in Human Resource Management, Finance, and Marketing. The course has no age restrictions and students are not required to physically attend the university at any point during the program
- Eco-friendly transportation: Mahatma Gandhi University (MGU) has launched an eco-friendly transportation initiative within its campus by introducing geared bicycles for students, teachers and staff. The primary goal is to reduce pollution and encourage sustainable commuting options. Initially, eight bicycles are available at the main gate of the campus during the pilot phase.

- Initiatives in Language Education: In line with its new four-year degree programs, MGU has introduced online Ability Enhancement courses in German, French, and Tamil. Notably, the inclusion of Tamil caters to students from the Tamil Nadu-Idukki border region, marking a first for universities in Kerala.
- National Conference on Internal Migration in India: Held on December 6 and 7, 2024, the Centre for Migration Policy and Inclusive Governance and the International Institute of Migration and Development jointly organized this conference to discuss the pressing issues and opportunities surrounding internal migration in India.

Kannur University

- Implementation of K-REAP Project: Government of Kerala has initiated the implementation of the Kerala Resources for Education Administration and Planning (K-REAP) project in Kannur University among the few selected Institutions in the State in the pilot run mode. This initiative will enhance the quality administration and academic activities in the University.
- Undergraduate Results Announced Promptly: In December 2024, Kannur University, along with other state universities, declared the first-semester undergraduate examination results within a month of the exams. This swift processing is part of broader educational reforms aimed at enhancing efficiency in the higher education sector

University of Calicut

- Implementation of Four-Year Undergraduate Programmes (FYUGP): Aligned with the National Education Policy (NEP) 2020, the University of Calicut introduced Four-Year Undergraduate Programmes across various disciplines. The first semester examinations for these programmes were conducted in November 2024, with results released promptly by December 30, 2024. Students can access their results through the official university website.
- Expansion of Manuscript Collection: The Thunchan Manuscript Repository at the university now houses over 8,500 ancient palm leaf manuscripts, making it Kerala's second-largest manuscript library. The collection includes texts in multiple languages and scripts, covering subjects like astrology, medicine, and grammar. Preservation efforts involve treating the manuscripts with isopropyl alcohol mixed with lemongrass oil and storing them in air-conditioned environments to prevent damage from pests
- Academic Achievements: The University of Calicut has been recognized for its academic excellence, securing a position among the top universities in India. In the National Institutional Ranking Framework (NIRF) 2024, the university was ranked 89th in the university category.

Kerala Agricultural University (KAU)

- MOOC Course: Safe Food Our Right The Centre for e-Learning at Kerala Agricultural University (KAU) has launched a free Massive Open Online Course (MOOC) titled 'Safe Food – Our Right' offered in Malayalam. Spanning 20 days and comprising 9 sessions, the course requires participants to dedicate 30 minutes to 1 hour daily via the KAU MOOC platform at celkau.in. Certificates will be awarded to participants who successfully complete the course, with a nominal fee for certification.
- Accreditation Achievement: In July 2024, KAU received a prestigious five-year accreditation from the National Agricultural Education Accreditation Board (NAEAB), valid from March 11, 2024, to March 10, 2029. The university achieved a Grade A rating with an impressive overall score of 3.14 out of 4. This accreditation covers diverse undergraduate and postgraduate programmes across KAU's affiliated colleges.
- Innovative Drone Application in Paddy Sowing: In July 2024, KAU successfully demonstrated the use of drones for paddy seed sowing in Alappuzha's Chakkankari paddy fields. The innovative method significantly reduced seed usage and labor costs, completing the sowing of one acre in just 25 minutes. This initiative underscores KAU's dedication to integrating advanced technology into traditional farming practices.
- Updated Agricultural Practices Guide: In February 2024, KAU released the 16th edition of its Package of Practices Recommendations: Crops 2024." This guide incorporates valuable lessons from the 2018 and 2019 floods and offers updated crop production technologies, including recommendations for salt-tolerant and short-duration paddy varieties. It serves as an essential resource for farmers and agricultural professionals in Kerala, supporting sustainable and resilient farming practices.
- **Reintroduction of Horticulture Course:** After a hiatus of four decades, KAU has reinstated the four-year B.Sc. Horticulture program. The course, last offered between 1979 and 1983, was discontinued. Its revival aims to address the growing demand for specialized education in horticulture.

Higher Education Matters February 2025 54

Sree Sankara University of Sanskrit (SSUS)

- Popularizing Sanskrit Language: As part of its efforts to promote the Sanskrit language, the Centre for Online Learning at Sree Sankaracharya University of Sanskrit (SSUS) has launched an online Basic Sanskrit Course in Malayalam. Open to individuals of all ages who can read and write Malayalam, the 14-week course includes 20 hours of instruction and is available for a fee of ₹2000. Designed to introduce Sanskrit and foster an appreciation for the language among the general public, this initiative aims to make Sanskrit more accessible and engaging.
- Expansion of Academic Programs: SSUS has introduced comprehensive four-year undergraduate programmes across diverse disciplines, including Sanskrit Vedanta, Vyakarana, Nyaya, Sahitya, Music, Dance (Bharatanatyam and Mohiniyattom), English, Malayalam, Hindi, History, Philosophy, and Social Work. Students can choose between a three-year undergraduate degree, a four-year 'honours' degree, or a four-year 'honours with research' degree, offering flexibility and depth to cater to varying academic and professional aspirations.

Kerala Veterinary & Animal Science University (KVASU)

- New Programme: M.Sc. in Wildlife Studies: Kerala Veterinary and Animal Sciences University (KVASU) in Pookode, Wayanad, has introduced a Master of Science in Wildlife Studies program. This course is tailored for aspiring "Planet Doctors," aiming to equip students with the skills to contribute to global health and wildlife conservation. Graduates will have diverse career opportunities with national and international NGOs, forest departments, research institutes, universities, zoos, airports, and environmental organizations.
- Academic and Research Initiatives: KVASU continues to excel in academic and research endeavors, offering hands-on training programmes in molecular genetic techniques and bioinformatics tools to support advanced life science research. Additionally, the College of Dairy Science and Technology in Thiruvananthapuram hosted 'VAIBHAVAM,' a three-day event bringing together students, industry professionals, farmers, and academics for knowledge sharing and collaboration.

National University of Advance Legal Studies (NUALS)

- Mentoring Scheme at NUALS: Established in 2005, the National University of Advanced Legal Studies (NUALS) has introduced a robust mentoring scheme to provide students with a valuable platform for addressing both academic and non-academic concerns. This initiative was inaugurated by the Vice Chancellor of the Central University of Kashmir at the NUALS campus in Kalamassery. Under the scheme, each faculty member will mentor a group of eight students, offering personalized guidance from their first year through to the completion of their course. This innovative approach aims to foster a supportive and enriching academic environment.
- **Recent Rankings:** In the India Today 2024 rankings, NUALS secured the 9th position among law colleges in India, a notable rise from its 11th position in 2023. This improvement underscores the university's unwavering commitment to academic excellence and its stature as a premier institution for legal education.

Kerala University of Fisheries and Ocean Studies (KUFOS)

- KUFOS Joins UArctic Collaborative Network: The Kerala University of Fisheries and Ocean Studies (KUFOS) has become a member of the University of the Arctic (UArctic), a global network of universities, colleges, and research institutes dedicated to Arctic research. Established in 2001, UArctic promotes education, research, and collaboration to address the unique challenges and opportunities in the Arctic region. KUFOS's membership was formalized during the Arctic Congress 2024 held in Bodo, Norway.
- Participation in NASA-ISRO NISAR Project: KUFOS has received a grant of ₹44 lakh to participate in the second phase of the NISAR project, a collaborative initiative between NASA and ISRO. The project aims to develop a space-borne synthetic aperture radar to provide high-resolution Earth observation data. This technology is expected to enhance systematic monitoring of agriculture, forestry, wetlands, and soil moisture estimation. The research outcomes are anticipated to advance understanding of forest ecosystems and hydrology, contributing significantly to global sustainable resource management efforts
- Fishery Boost: The Kerala University of Fisheries and Ocean Studies (KUFOS) has expanded its collaboration with the Department of Fisheries to enhance native fishery resources in the state's reservoirs. As part of the Fish Production and Development Project in Dams 2024-25, the endangered Manjakuri species, listed on the IUCN Red List, will be introduced into the Peringalkuthu reservoir on the Chalakudy River. This initiative aims to boost native fish populations and promote sustainable fishery practices across Kerala.

• Establishment of Mangrove Research Centre: KUFOS is progressing with plans to establish an international centre for mangrove research at its Puthuvype campus. The centre aims to address critical issues related to coastal protection and ecological balance, focusing on the role of mangroves in mitigating sea erosion and supporting marine biodiversity. The draft master plan has been submitted to the State Fisheries Minister for approval.

Kerala Kalamandalam, Thrissur

- Male Students in Mohiniyattam: The state's premier arts institution, has announced plans to admit male students into its Mohiniyattam courses, a classical dance form traditionally reserved for women. This historic decision, made by the institution's executive committee, will take effect in the upcoming academic year, allowing male students to enroll at the degree, and postgraduate levels. The move follows recent controversies and aims to promote inclusivity and gender equality in the performing arts.
- **Recognition in Kerala Awards 2024:** In October 2024, the Kerala government announced the recipients of the Kerala Awards 2024, modeled after the Padma Awards, to honor outstanding individuals across various fields. Kalamandalam Vimala Menon was among the five individuals awarded the Kerala Sree, recognizing her excellence in the arts.
- Gotipua dance: It is a traditional dance form originating from the state of Odisha, India. It is characterized by young boys dressed as female dancers, traditionally performed in the temple precincts of the region. The dance style involves graceful movements, intricate footwork, and storytelling through expressions and gestures. "Spic Macay" organized a Gotipua dance performance at the Kerala Kalamandalam Kuttambalam on June 22, 2024.

Cochin University of Science and Technology (CUSAT)

- Rankings: In the latest QS World University Rankings on Sustainability, Cochin University of Science and Technology has been placed in the 971-980 band globally, ranking 299th in Asia, 38th in India, and first in Kerala. Additionally, CUSAT secured the 609th position globally in the environmental impact category and 576th in governance.
- American Corner: The 'American Corner,' a resource center offering free and open access to communities eager to learn about the United States, was inaugurated at the Cochin University of Science and Technology. Established through a collaborative agreement between CUSAT and the U.S. Consulate General in Chennai, this center becomes part of a global network of nearly 600 American Spaces. These spaces serve as key cultural and informational hubs operated by the U.S. government to foster international engagement and knowledge sharing.
- Skill Development Hub: Daikin, a Japanese air-conditioner manufacturing giant, signed an MoU and launched its 31st Centre of Excellence (CoE) in the country at Cochin University of Science and Technology . This is the company's second CoE in the State. Established through a memorandum of understanding between the University and Daikin, the centre aims to train students and staff in air conditioning system operations. It will also offer students opportunities for internships and workshops as part of the initiative.



ROBOTS FOR CAMPUS SECURITY

A school in New Mexico, USA, has initiated a pilot programm featuring a robot patrolling the campus round-the-clock. According to a recent Wall Street Journal report, this machine, now deployed at Santa Fe High School, is undergoing training to familiarize itself with the school's daily routines. Its goal is to identify and alert authorities to individuals on campus after hours or displaying aggressive behavior."

The robot is set to patrol the campus 24 hours a day, seven days a week. Its artificial intelligence system is currently being trained to learn the school's regular activities, which will support it in recognising abnormal or aggressive behaviour, as well as unknown intruders.

VISUAL & AUDITORY LEARNING-SMART GLOVE

A revolutionary advancement in wearable technology is developed in which a smart glove designed to offer tactile feedback, developed by MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) aims to assist users in learning new skills, improve precision in robot manipulation, and support professional training. As per this technology, when traditional visual and auditory learning approaches, the smart glove caters specifically to individuals who benefit most from tactile feedback—a sensory mode often underutilized in educational and training contexts. By integrating tactile sensors and haptic actuators into textiles, the glove captures and replicates touch-based instructions seamlessly which facilitates enhanced learning experiences across diverse fields such as surgery, music, and beyond.

SILICON VALLEY AND STANFORD UNIVERSTY

Silicon Valley, the global hub for technology and innovation, has deep historical and educational roots connected to Stanford University. The relationship between Stanford and Silicon Valley has played a crucial role in the region's development and success. Stanford University has been a center for pioneering research in various fields, particularly in engineering, computer science, and entrepreneurship. Research breakthroughs at Stanford have frequently translated into innovative technologies and startups.Faculty members at Stanford, including influential figures like Frederick Terman (known as the "father of Silicon Valley"), have mentored and inspired generations of students to pursue technological advancements and entrepreneurial ventures.

UNIVERSITY COLLABORATION IN ICT

The Government of Japan and a Kenyan university have partnered to establish an African regional hub for science, technology, and innovation (STI). The initiative, led by the Japan International Cooperation Agency (JICA), focuses on agriculture, engineering, and information and communications technology (ICT) as key areas for collaboration. Since June 2020, the AFRICA-ai-JAPAN project has been strengthening knowledge and skills in agriculture, engineering science, and biotechnology. The project aims to leverage local indigenous knowledge, resources, and experiences to address Africa's development challenges, fostering innovation and sustainable solutions across 10 African countries.



Image Source: OpenAI's DALL-E model.



Image Source: OpenAI's DALL-E model.



Image Source: pixabay.com



Image Source: pixabay.com

ANIMAL COMMUNICATION

Recent research into animal communication and cognitive abilities has revealed remarkable findings. Crows, for instance, have been shown to count objects, similar to young children, in studies by the University of Cambridge. Many animals, including dolphins, gorillas, and elephants, use complex vocalizations and gestures to communicate, as discovered by the University of California, Santa Cruz, and other research institutions. Additionally, monkeys and rats exhibit problem-solving skills and memory, with studies conducted by the University of Tokyo and the University of Chicago. These discoveries challenge the view that cognitive abilities are unique to humans, highlighting sophisticated intelligence in animals.

CRISPR-CAS9 IN HUMAN EMBRYOS

In a groundbreaking experiment, researchers at Harvard University and MIT successfully used CRISPR-Cas9 technology to edit genes in human embryos, targeting a specific genetic mutation linked to heart disease. This innovative study demonstrated the potential for precise gene editing in human embryos, offering a pathway to eliminate hereditary diseases before birth. The research, published in 2024, marks a significant advancement in genetic medicine, although it raises ethical and safety concerns. CRISPR-Cas9's ability to modify the DNA of embryos could revolutionize treatments for genetic disorders, though regulatory and ethical frameworks are needed for its safe application.

ARTIFICIAL PHOTOSYNTHESIS

In a significant advancement, researchers at Stanford University have developed a system for artificial photosynthesis that mimics the natural process of photosynthesis to generate clean hydrogen fuel. The system uses solar energy to split water molecules, producing hydrogen, a potential sustainable energy source. This breakthrough could provide an eco-friendly alternative to fossil fuels by creating hydrogen at a much lower cost and with greater efficiency. The research, led by Stanford's Stanford Institute for Materials and Energy Sciences (SIMES), opens new avenues for renewable energy solutions, potentially revolutionizing energy production and addressing climate change concerns.

NEUROSCIENTIFIC MAPPING OF BRAIN

Researchers at the Allen Institute for Brain Science have created a detailed neuroscientific atlas mapping around 25 subclasses of cells in the primary motor cortex. This comprehensive map provides insights into how different types of neurons contribute to motor functions, offering a deeper understanding of brain function and connectivity. The study, which used advanced imaging techniques and celllabeling methods, reveals the complexity of neural circuits involved in movement and motor control. This work is crucial for advancing treatments for neurological disorders like Parkinson's disease and stroke, and it paves the way for more targeted therapeutic interventions.



Image Source: www.freeimages.com



Image Source: OpenAI's DALL-E model.



Image Source:: https://pixabay.com/



Source:www.canvaimages

GROSS ENROLMENT RATIO (GER)

Gross Enrolment Ratio (GER) measures the level of enrolment in a specific education level, such as primary, secondary, or tertiary education, relative to the eligible population. It is calculated using the formula: GER = (Total enrolment in the education level / Population of the official age group) × 100. Data for GER is typically collected from educational institutions, government agencies, and surveys. This ratio is important because it indicates access to education and helps identify enrolment gaps for policy improvements. Additionally, GER enables international comparisons of educational attainment, making it a key metric for evaluating educational participation and accessibility. The official or eligible age for higher education typically ranges from 18 to 23 years, coinciding with the time students complete their secondary education around age 17 or 18. This age range is widely accepted as it reflects the period when individuals are eligible to enroll in postsecondary institutions, such as colleges and universities. Definitions of this age bracket may vary based on national educational policies and the legal age of majority. For instance, in India, the All India Survey on Higher Education (AISHE) uses this age range to analyze participation rates and the Gross Enrolment Ratio (GER) This classification also plays a

This classification also plays a crucial role in statistical data collection, allowing for consistent comparisons across regions and countries. Organizations like UNESCO often use similar age brackets in their educational reports to maintain uniformity in data analysis.

GENDER PARITY INDEX (GPI)

The Gender Parity Index (GPI) is an important and insightful metric for assessing gender equality in education, measuring the ratio of female to male students enrolled at different educational levels. It is calculated by dividing the total number of female students by the total number of male students. A GPI of 1 signifies gender parity, whereas values below 1 indicate a male advantage, and values above 1 suggest a female advantage in enrollment. GPI plays a crucial role in identifying gender disparities, helping policymakers and educators to implement strategies that address these imbalances. Achieving gender parity in education is essential for fostering broader social and economic development, especially in areas where cultural and economic barriers restrict female access to education. In regions like Kerala, India, the GPI has shown positive trends, with a notable figure of 1.44, reflecting strong female representation in higher education compared to males. By monitoring GPI trends, stakeholders can design targeted initiatives to enhance gender equality and create equitable educational environments for all students. The Gender Parity Index (GPI) is critically important on an international scale as it serves as a key indicator of gender equality in education across various countries. By comparing the enrolment ratios of female and male students, the GPI helps to identify disparities and track progress toward gender equality in education globally. UNESCO emphasize that achieving gender parity in education is fundamental to advancing women's rights and fostering sustainable economic development and an improved standard of living.

FIRST Generation Learners (FGL)

First-Generation Students are individuals who are the first in their families to attend college or university, meaning their parents or guardians did not complete a degree. They may face unique challenges, including a lack of familiarity with the college experience, socioeconomic barriers, cultural expectations, and feelings of isolation or imposter syndrome.

To support first-generation students, many institutions offer mentorship programms, first-year experience initiatives, and networking opportunities aimed at fostering a sense of belonging and providing necessary guidance. These support systems are crucial for enhancing educational outcomes and promoting equity in higher education. For more detailed insights on firstgeneration students, you can explore resources from the National Center for Education Statistics (NCES) and other educational organizations. First-generation students play a vital role in higher education, contributing diverse perspectives and experiences. Addressing their unique challenges through targeted support can enhance their educational outcomes and promote greater equity within the academic landscape. Using indirect questions allows you to create a welcoming atmosphere where students feel comfortable sharing their experiences without the fear of being singled out or offended. This method not only aids in gaining insight into their backgrounds but also encourages

an open dialogue about educational pathways and available support systems.

CONNECT TO YOUR UNIVERSITY

University of Kerala

General Enquiry: 9188526671 helpdesk@keralauniversity.ac.in Helpdesk (WhatsApp only): 8547330240 Examination Helpdesk: 9188526674 / 9188526670 / 9188526675 Registrar's Office: 0471-2305631 registrar@keralauniversity.ac.in Controller of Examinations:0471-2305946 ku.controller@keralauniversity.ac.in Finance Officer: 0471-2300750 Computer Centre: 0471-2305801 kucc@keralauniversity.ac.in School of Distance Education: 0471-2991173 sde@keralauniversity.ac.in

University of Calicut

General Enquiry (SUVEGA): 0494 2660600 suvega@uoc.ac.in Vice Chancellor's Office: 0494 2407102 vcoffice@uoc.ac.in Registrar's Office: 0494 2407104 reg@uoc ac in Pro Vice Chancellor's Office: 0494 2407103 pvc@uoc.ac.in Pareeksha Bhavan): 0494 2407200; ce@uoc.ac.in Public Relations Office: 0494 2407227 pro@uoc.ac.in Directorate of Admissions: 0494 2407016, 0494 2407017 doa@uoc.ac.in Centre for Distance and Online Education: 0494 2407356 0494 2400288 sde@uoc.ac.in Dean of Students' Welfare: 0494 2407353 dswoffice@uoc.ac.in Calicut University Computer Centre: 0494 2407527 Email: dcucc@uoc.ac.in

Kerala University of Fisheries and Ocean Studies (KUFOS)

General Enquiries: 0484-2701085 utypanangad@kufos.ac.in Admissions Office:0484-2701085, 0484-2700598 admissions@kufos.ac.in Registrar's Office: 0484-2703782 registrar@kufos.ac.in Vice Chancellor's Office: 0484-2700964 vc@kufos.ac.in Controller of Examinations: 0484-2703782 coe@kufos.ac.in Public Relations Office: 0484-2703782 pro@kufos.ac.in Directorate of Research: 0484-2703782 research@kufos.ac.in Directorate of Extension: 0484-2703782 extension@kufos.ac.in Library: 0484-2703782; library@kufos.ac.in IT Cell: 0484-2703782; itcell@kufos.ac.in

Mahatma Gandhi University, Kottayam University Front Office (Enquiry): 0481 2733375, 0481 2733505, 0481 2733516, 0481 2733580, 0481 2733626 frontoffice@mgu.ac.in Vice Chancellor's Office: 0481 2731001 vc@mgu.ac.in Registrar's Office: 0481 2731006 registrar@mgu.ac.in Controller of Examinations: 0481 2733333 ce@mgu.ac.in Public Relations Officer (PRO): 0481 2733370 pro@mgu.ac.in Online Equivalency/Eligibility Certificates: 0481 2733503 mgucerthelp@mgu.ac.in E-Payment Assistance: epayhelp@mgu.ac.in

Kerala Agricultural University (KAU):

General Enquiries: 0487-2438011 info@kau.in Vice Chancellor's Office: 0487-2438001 vc@kau.in Registrar's Office: 0487-2438011 registrar@kau.in Controller of Examinations: 0487-2438106 ce@kau.in Director of Research: 0487-2438101 dr@kau.in Director of Extension: 0487-2438131 de@kau in comptroller@kau.in Public Relations Officer: 0487-2438182 pro@kau.in IT Cell: 0487-2438188

Kannur University

General Enquiry: 0497 2715185 WhatsApp: 8547016185 enquiry@kannuruniv.ac.in Registrar's Office: 0497 2715331 registrar@kannuruniv.ac.in Controller of Examinations: 0497 2715351 ce@kannuruniv.ac.in fo@kannuruniv.ac.in Academic Branch: 0497 2715221 academic@kannuruniv.ac.in School of Distance Education: 0497 2715251 sde@kannuruniv.ac.in Research Directorate: 0497 2715208 research@kannuruniv.ac.in IT Centre: 0497 2715375 itcentre@kannuruniv.ac.in

Digital University Kerala

General Enquiries:+91-471-2788000 info@duk.ac.in Admissions Office:admissions@duk.ac.in Registrar's Office:registrar@duk.ac.in Controller of Examinations: coe@duk.ac.in Public Relations Office: pro@duk.ac.in Technical Support:support@duk.ac.in Vice Chancellor:+91-471-2788000; vc@duk.ac.in Cochin University of Science and Technology (CUSAT) General Enquiry: 0484 2577290, 0484 2862281 Public Relations 0484 25775500 Directorate of Admissions: 0484 2577100, 0484 2577159 admissions@cusat.ac.in Office of International Relations: 0484 2862255: oir@cusat.ac.in Controller of Examinations: 0484 2576623, 0484 2577109, 0484 2862240 controlex@cusat.ac.in Academic Matters:0484 2576623 Service Matters: 0484 2575181 registrar@cusat.ac.in Planning:0484 2576419 Security Office (24 Hours): 0484 2575101

Sree Sankaracharya University of Sanskrit (SSUS), Kalady General Enquiry: 0484 269 9731 Helpline: 8301853380 reg@ssus.ac.in Vice Chancellor's Office: 0484 2463580 (Office) Mobile: 09744631327 vc@ssus.ac.in Registrar's Office: 0484 2463480 (Office); 9446061639 reg@ssus.ac.in Public Relations Office: 0484 2463380; 91 9447123075 Dean of Students' Welfare: 9446762054 dss@ssus.ac.in Computer Centre:+91 484 2463380

Kerala Veterinary and Animal Sciences University (KVASU) General Enquiries:04936-209220 Vice Chancellor's Office: 04936-209209 vc@kvasu.ac.in Registrar's Office:registrar@kvasu.ac.in 04936-209220 Public Relations Officer: 04936-209230 Directorate of Academics and Research: 04936-260263; officedar@kvasu.ac.in

APJ Abdul Kalam Technological University (APJAKTU)

General Enquiries: 0471-2598122 university@ktu.edu.in Technical Support: 0471-2593120, 0471-2593128, 0471-2590029 support@ktu.edu.in Vice Chancellor's Office: 0471-2598222 Registrar's Office: 0471-2598722, 0471-2785615 Controller of Examinations: 0471-2785617 Dean (Research): 0471-2785626 Dean (Academics): 0471-2785628 Finance Officer: 0471-2785624

ALL INDIA SURVEY ON HIGHER EDUCATION & NODAL OFFICERS IN KERALA

Implementation in Kerala is an annual initiative by the Ministry of Education, India, aimed at collecting data from higher education institutions to support evidence-based policymaking and sectoral analysis. At the national level, the Statistics Division, in collaboration with the National Informatics Centre (NIC) and regulatory bodies such as UGC and AICTE, manages the survey's software and coordination. In Kerala, the State Nodal Agency for AISHE is the Kerala State Higher Education Council, which works with institutional and university Nodal Officers to ensure accurate data collection. This effort is further supported by training programmes organized in collaboration with the AISHE Unit in Delhi. AISHE-University Nodal Officers are provided in the table.

AISHE Code	Institute Name	Nodal officer (NO)	Email (NO)	Mobile (NO)
U-0786	A P J Abdul Kalam Technological University	Dr Boby Philip	jdplanning@ ktu.edu.in	9495741482
U-0252	Central University of Kerala, Kasaragod	SENTHIL KUMARAN PERIYASAMY	cuklibrarian@ gmail.com	9495024044
U-0903	Chinmaya Vishwavidyapeeth	Arun Krishnadas	arun.krishnadas@ cvv.ac.in	9446895277
U-0253	Cochin University of Science & Technology, Kochi	Prof Sunoj S.M	smsunoj@ cusat.ac.in	9446627103
U-0802	Indian Institute of Information Technology, Kottayam	Dr. Josit Mariya	jositmariya@ iiitkottayam.ac.in	9446275181
U-1013	Indian Institute of Management Kozhikode	M. P. SEBASTIAN	accreditation@ iimk.ac.in	9846693945
U-0254	Indian Institute of Science Education & Research (IISER), Thiruvananthapuram	Sudin B Babu	ranking@ iisertvm.ac.in	9497673186
U-0255	Indian Institute of Space Science and Technology, Thiruvananthapuram	Subrahamanian K S Moosath	smoosath@ iist.ac.in	9495743148
U-0878	Indian Institute of Technology, Palakkad	K M UNNI	unni@ iitpkd.ac.in	9497718121
U-0256	Kannur University, Kannur	Mr. Anish Kumar K P	anishkumarkp@ kannuruniv.ac.in	9677818007
U-0257	Kerala Agricultural University, Thrissur	Dr. P.O Nameer	director.iqac@ kau.in	9446573106
U-0258	Kerala Kalamandalam, Thrissur	Shaji Samuel	Academic.kalamandalam@ gmail.com	9947307373
U-1154	Kerala University of Digital Sciences Innovation and Technology	Dr Sherin DR	sherin.dr@ duk.ac.in	8921495631
U-0259	Kerala University of Fisheries & Ocean Studies, Kochi	RANJEET K	ranjeet@ kufos.ac.in	9744171986
U-0630	Kerala University of Health and Allied Sciences	K HARILAL	sm@ kuhs.ac.in	9446176171
U-0261	Kerala Veterinary & Animal Science University, Wayanad	Dr. Syamala K	syamala@ kvasu.ac.in	9447668582
U-0262	Mahatma Gandhi University, Kottayam	SANTHOSH P THAMPI	drspthampi@ rediffmail.com	9447101530
U-0263	National Institute of Technology, Calicut	V Pavan Kumar Malladi	malladi@ nitc.ac.in	9746920959
U-0264	National University of Advanced Legal Studies, Kochi	DR. LINA ACCA MATHEW	registrar@ nuals.ac.in	9446899002
U-0266	Sree Chitra Tirunal Institute for Medical Sciences And Technology, Thiruvananthapuram	Ravi Prasad Varma P	rpvarma@ sctimst.ac.in	9400570835
U-0265	Sree Sankaracharya University of Sanskrit, Kalady	Dr. Biju Vincent	bjuvincent@ ssus.ac.in	9961352126
U-1130	Sree Narayanaguru Open University	Prof Abdul Salim A	directorciqa@ sgou.ac.in	9359263841
U-0716	Thunchath Ezhuthachan Malayalam University, Tirur	Sreeja V	sreejav@ temu.ac.in	9447376984
U-0251	University of Calicut, Malappuram	Dr. Sebastian C. D.	drcdsebastian@ gmail.com	9447648961
U-0260	University of Kerala, Thiruvananthapuram	Manoj Chacko	manojchacko02@ gmail.com	9447310097

ACREM-STEM at the University of Kerala

the University of Kerala recently inaugurated its Advanced Centre for Regenerative Medicine and Stem Cell Research in Cutaneous Biology (AcREM-STEM), marking a significant milestone in medical research. The ceremony took place at 4:00 PM at EMS Hall, Kariavattom Campus, with Shri. Pinarayi Vijayan, the Hon'ble Chief Minister of Kerala, serving as the Chief Guest. Dr. R. Bindu, Hon'ble Minister for Higher Education, presided over the event, while the Vice-Chancellor of the University delivered introductory remarks. The AcREM-STEM facility was established with the generous support of the Government of Kerala through the Performance Linked Encouragement for Academic Studies and Endeavour (PLEASE) initiative, aiming to advance research in regenerative medicine, particularly in the application of stem cells to cutaneous biology.

This new centre is poised to play a crucial role in fostering scientific innovation and medical breakthroughs, reinforcing the University of Kerala's commitment to leading-edge research in health sciences. The academic community and the public participated in this important occasion, reflecting the university's dedication to enhancing research capabilities and educational excellence in the region.



Atmospheric Radar Research (ACARR) Centre-CUSAT

In December 2023, the Ministry of Earth Sciences awarded ACARR a research grant of ₹8.8 crore over five years to establish the 'Equatorial Testbed for Atmospheric Observation, Modelling, and Technology Development (ATMOSTECH)'. This centre aims to provide diverse datasets for both operational and research purposes, functioning as a satellite centre for all MoES institutes. Its primary objective is to enable cutting-edge research and the development of advanced observational and modelling techniques to investigate the tropical near-equatorial region, comprehend the physical processes involved, and enhance numerical models.

Advancements in Radar Technology

ACARR operates a state-of-the-art 205 MHz Stratosphere-Troposphere (ST) radar, the first of its kind installed near the equator. This radar provides high-resolution wind data from altitudes of 315 meters to over 20 kilometers, enabling comprehensive studies of atmospheric processes from the lower and middle atmosphere to the ionosphere. The facility also houses supplementary remote sensing instruments, facilitating a multidisciplinary approach to atmospheric research



Development of Mine-Detection System-Digital University

Development of Mine-Detection System

The Digital University of Kerala (DUK) has developed an advanced mine-detection system for the Indian Army, integrating machine learning, radar, and drone technologies. This innovation aims to enhance safety and efficiency in demining operations. DUK has formally handed over this mine-detection technology to the Indian Army, marking a significant step in academia-defense collaboration. The system is designed to operate effectively in diverse terrains, including rugged and forested areas, thereby enhancing the Army's demining capabilities. Impact on Demining Operations

Traditional demining methods are often slow and pose significant risks to personnel. The introduction of this advanced system aims to:

- Enhance Safety: By enabling remote detection, the system reduces the need for manual intervention in hazardous zones.
- Increase Efficiency: The integration of machine learning and radar technologies allows for quicker and more accurate identification of landmines.
- Support Humanitarian Efforts: Improved demining processes can facilitate the safe reclamation of land for agriculture, infrastructure development, and habitation in post-conflict regions.



American Corner in campus

Cochin University of Science and Technology (CUSAT), in collaboration with the US consulate, launched an American Corner on its campus on December 3rd 2024. This is the third such center in India and the first in Kerala. The initiative is part of a global network of 600 centers across 130 countries, promoting resources, training, and cultural exchanges. The center will offer free workshops and training open to the public, focusing on six areas: alumni engagement, English programmes, STEAM, US education information, cultural programmes, and community engagement.

CUSAT's Vice-Chancellor, Junaid Bushiri, highlighted that the center supports the university's internationalization goals and can bridge gaps in industry, education, language, and culture. The inauguration ceremony was led by Jeanne Briganti, Public Affairs Officer at the US Consulate General in Chennai. The inaugural programms include workshops on robotics, 3D printing, business communication for entrepreneurs, and eLibraryUSA training for research scholars. This will offer cultural programmes, educational resources, workshops, training, digital libraries, community engagement, and alumni connections, aimed at fostering US-India collaboration and promoting US culture, education, and resources.



KERALA STATE HIGHER EDUCATION COUNCIL PUBLICATION

HIGHER EDUCATION MATTERS

A MONTHLY PUBLICATION



ADVERTISEMENT TARIFF

SIZE	ТҮРЕ	RATE
Full Page (Back cover)	colour/black & white	20000
Full Page (front Cover back)	colour/black & white	15000
Full Page (Inside pages)	colour/black & white	10000
Half Page (inside pages)	colour/black & white	5000
Quarter Page (inside pages)	colour/black & white	2500

CONTACT

7561018708

0

contact.hematters@gmail.com

kshec, science and technology museum campus, vikas bhavan p.o., thiruvananthapuram-35



Name:
Designation:
Address:
CityState:
PIN code (Mandatory):Mobile No.:
Landline NoEmail ID:
PAYMENT DETAILS
Cheque No./ Draft.No
Date:
Amount: Rs
Payable to 'The Kerala State Higher Education Council' A/c No: 336302010139637 IFSC: UBIN0533637
Name of Bank: Union Bank of India Branch: Trivandrum Main
If UPI payment, mention UTR No
Send to contact.hematters@gmail.com contact no.9446787902, 7561018708 or
To The Kerala State Higher Education Council, Science and Technology Museum Campus

Vikas Bhavan P.O., Thiruvananthapuram-695033, Kerala, India Phone: 0471 2301292

Higher Education for the Future is a bi-annual peer-reviewed multi-disciplinary journal that is designed to shape the new generation of higher education based on national and international experience. It seeks to address a wide spectrum of issues including policy, pedagogy, and research in higher education.

RESEARCH





SAGE journal published in Association with The Kerala State Higher Education Council



subscribe now

JOIN THE CONTRIBUTORS CLUB OF 'HIGHER EDUCATION MATTERS' AND NOURISH THE ACADEMIC CONTENTS OF THE MAGAZINE

CONTRIBUTORS CLUB HAYE A STORY TO TO TELL?

We invite scholars, academicians, students, and faculty members to share their insights, research, and stories in our magazine! Your expertise and perspectives are invaluable in shaping this magazine that educates, inspires, and sparks thoughtful discussion among readers. Whether it's an experience on your latest research, campus life, a reflection on current trends, or an indepth analysis of your field, we welcome your contribution.

Join us in creating a platform where knowledge thrives and ideas come to life—submit your work not exceeding 500 words, today!



T/KL/2024/1122/2414/1369





SHAPING KERALA'S FUTURE INTERNATIONAL CONCLAVE (**NEXT-GEN HIGHER EDUCATION**



DEPT. OF HIGHER EDUCATION, GOVT. OF **KERALA**





SHRI. PINARAYI VIJAYAN

HON. CHIEF MINISTER OF KERALA

DR. R. BINDU HON. MINISTER FOR HIGHER EDUCATION & SOCIAL JUSTICE

The International Conclave on the Future of Higher Education is a visionary gathering designed to bring together thought leaders, educators, policymakers, and stakeholders from around the world to explore and address the pressing challenges and opportunities shaping the future of higher education. Set in Kerala, a state at the forefront of educational innovation, this conclave aims to create a dynamic and collaborative space for dialogue and action

for enquiry: support@keralahighereducation.com

visit for details: https://keralahighereducation.com





Published by the Kerala State Higher Education Council, Science and Technology Museum Campus, Vikas Bhavan P.O. Thiruvananthapuram, Kerala, India-695033 PMATTERS Published by the Registrar, Kerala State Higher Education Council, Thiruvananthapuram kshec@kerala.gov.in. Managing Editor: Member Secretary, Kerala State Higher Education Council. msheckerala@gmail.com. www.kshec.kerala.gov.in: Printed by Kerala State Higher Education Council Thiruvananthapuram.