



University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)

ORIC – Annual Report 2023



Prepared by



Office of Research, Innovation & Commercialization (ORIC)

University of Central Punjab, Lahore

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Office of Research Innovation & Commercialization

ORIC

Annual Report, 2023



University of Central Punjab, Lahore



University of Central Punjab, Lahore

ORIC (Office of Research, Innovation & Commercialization) Annual Report, 2023

Director ORIC Message

As the Director of UCP's Offices of Research, Innovation, and Commercialization, I consider it an honor to be a part of the university's culture of excellence in the field of knowledge, research, and entrepreneurship. The ORIC is responsible for facilitating high-quality research, innovation activities, and their commercialization at the university. Over the past year, ORIC has worked with the Faculty and Researchers to guide research-led initiatives and to assist researchers in the grant application process, as well as in the promoting innovation, commercialization, collaboration, and capacity building. The advancement of societies and economies heavily relies on the active participation of the institutions in higher education, research, and innovation. They promote economic growth, enhance technological progress, and facilitate job creation. In current competitive landscape, I am confident that UCP will succeed in cultivating new partnerships with leading companies, foundations, and other research-intensive institutions. These partnerships will not solely focus on the dissemination of knowledge from the lab to real-world implementation. They will provide essential funding for talented faculty and students to engage in foundational research, facilitate the exchange of ideas between students and faculty with the most exceptional intellectuals both within and beyond the university, and, perhaps most significantly, assist in preparing students to become informed participants in a rapidly evolving world. I would like to acknowledge top management including the Pro-Rector, Faculty, and staff for their unwavering support towards the ORIC activities.

Director ORIC

About UCP



When the University operations started in October 1999, it offered courses in Management Studies, Information Technology, Commerce and Law through its principal constituents i.e. Punjab College of Business Administration (PCBA), Punjab Institute of Computer Sciences (PICS) & Punjab College of Information Technology (PCIT), Punjab College of Commerce (PCC) and Punjab Law College (PLC) respectively, all situated in Lahore.

The University of Central Punjab provides its students with innumerable academic, extra and co-curricular experiences, which equip them with skills and knowledge that stay with them beyond their years at university. Students and alumni have succeeded in contributing to the fields of health, business, technology, law, engineering, media, and science. Students are given the opportunity to discover their area of interest as each of our nine faculties offers a range of programme. Highly qualified and professionally experienced faculty members, trained from national and international institutes incorporate new teaching and research methods and work ceaselessly to help students achieve academic excellence. Furthermore, University of Central Punjab has numerous societies which promote education, socialization, entrepreneurship, social causes and different forms of art.

Our vision is to create an institution, built on the foundation of providing quality education to the youth of Pakistan. This core belief has been validated through top rankings, accreditations, and awards from leading national and international academic organizations.

The University of Central Punjab offers cutting edge facilities, a continuously expanding infrastructure; science and technology labs furnished with latest and highly advanced equipment. Being one of the first educational institutes of Pakistan to move towards a greener environment, University of Central Punjab has installed solar panels on campus. A state-of-the-art auditorium, webinar room, production house and other such amenities allow our students to engage with the material learned in the classroom in a myriad of ways which includes implementing skills practically, diving deeper into the curricula as well as having the opportunity to interact with experts in their chosen fields.

Education in the 21st century requires adapting to the challenges of modern times and maintaining a balance between continuity and change. The adaptation of technological advancements has taken over the old traditional paradigms of education. At the University of Central Punjab all our efforts are focused around enriching the educational experience of our students and providing Pakistan with a well-educated and socially responsible populace.

UCP offers everything students need to develop and succeed in their academic and professional lives. To make the learning experience enjoyable and fulfilling, students are provided with cutting-edge facilities and infrastructure. Multiple labs are provided with latest and highly sophisticated equipment. Airconditioned classrooms equipped with multimedia projectors facilitate teaching process by enhancing learning and understanding.

Our vision is to create an institution, built on the foundation of providing quality education to the youth of Pakistan.

The University offers an intuitive and stimulating experience through multidisciplinary research and teaching, with a focus on integrated learning, intellectual curiosity, and innovative problem solving. Its academic members are committed to teaching and creating knowledge.







Vision

To become an internationally acclaimed University in teaching and research.

Mission

To provide quality education leading to research, employability and entrepreneurial pursuits creating societal impact, serving the nation and the world.

Core Values

	<p><u>Integrity:</u></p> <p>We put honesty and ethical responsibility at the core of everything we do</p>		<p><u>Respect:</u></p> <p>We treat everyone with dignity and value the wisdom and expertise of the people that surround us</p>
	<p><u>Tolerance:</u></p> <p>We accept the existence of different views, ideas, and people even if we may disagree with them</p>		<p><u>Commitment:</u></p> <p>We are passionate and determined to work hard in order to achieve our goals</p>
	<p><u>Service:</u></p> <p>We believe in helping our community and working together to empower each Other.</p>		<p><u>Creativity:</u></p> <p>We celebrate innovation and encourage new ways to think.</p>

Chapter No. 1

About ORIC

ORIC (Office of Research Innovation and Commercialization) play a vital role in supporting researchers by providing resources, guidance, and assistance in various aspects of research. This includes helping researchers identify funding opportunities, develop grant proposals, and manage research projects effectively. A significant responsibility of an ORIC is to manage the transfer of knowledge, technology, and intellectual property from the institution to industry partners or startups. This helps bridge the gap between academic research and real-world applications.



ORIC often foster collaborations between researchers and industry partners. These partnerships can lead to joint research projects, funding opportunities, and the exchange of expertise, benefiting both academia and industry.

ORICs play a crucial role in facilitating research, innovation, and collaboration within academic and research institutions, with the ultimate goal of advancing knowledge and bringing the benefits of research to society. The specific functions and priorities of an ORIC may vary from one institution to another, but they typically focus on supporting and promoting research and innovation endeavors.

ORICs may provide support and resources to faculty and researchers interested in publishing their research in academic journals. This support can include guidance on selecting appropriate journals, navigating the submission process, and understanding publication policies.

ORICs may help researchers secure funding to attend conferences, present their research, and network with peers. They may provide information about internal and external funding opportunities for conference travel.

1.1 Vision

To promote and strengthen the culture of research and innovation at UCP and link the industry with university for accelerating the process of creation and diffusion of cutting-edge knowledge and technologies for solving the most pressing problems of our times.

1.2 Mission

The goal of ORIC is to promote and enhance the scholarly environment in all disciplines of UCP in order to align it with other renowned educational institutions nationally and internationally, while maintaining the highest standards of scholarly inquiry by both scholars and faculty. Moreover, ORIC aims to make a positive impact by fostering research leadership, enabling them to play a distinctive role in shaping the economic trajectory of the nation through internationally recognized research accomplishments which aims to strengthen the national economy.

Promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy

1.3 Purpose

The development, expansion, improvement, and management of the university's research programs, as well as the direct connection between research activities and the academic, social, and economic interests of the institution and its wider community, are the goals of the Office of Research, Innovation, and Commercialization (ORIC). Additionally, the ORIC is in charge of making sure that the caliber of the research meets the highest international standards and elevates the university's standing among the top research institutions in the world. In order to fulfill its mission, the ORIC must ensure that all research programs and policies uphold the fundamental principles of academic freedom, professional integrity, and ethical behavior. It must also ensure complete compliance with all university policies, legal mandates, and operational standards.

1.4 ORIC Domains

The Office of Research, Innovation & Commercialization (ORIC) seeks to help all faculties intentionally and effectively in the following three areas:

- ❖ Develop your technological expertise.
- ❖ Enhance linkages between industry and academia.
- ❖ Producing and carrying on a research policy.

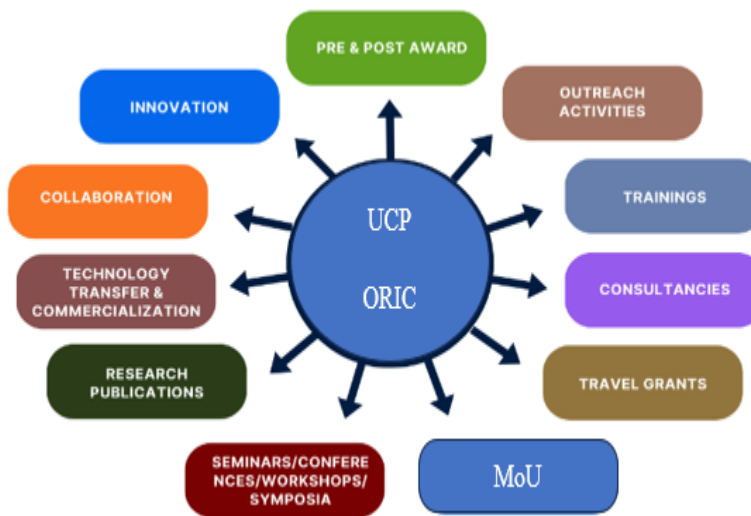
1.5 ORIC Services

- ❖ Research Publications.
- ❖ Research Proposals & Grants/ Research Projects.
- ❖ Research Journals and Conferences.
- ❖ Patents Filed/ Granted.
- ❖ Technology Transfer and Commercialization.
- ❖ Industrial Linkages.
- ❖ Business Incubation Services.
- ❖ Trainings and MOUs.

1.6 Objectives of ORIC

The Office of Research, Innovation & Commercialization, also known as ORIC, offers comprehensive services for any issue related to R&D, innovation, patents, commercialization, collaborations, and organizing honoraria for research publications as well as seminars,

colloquia, symposiums, conferences, and workshops. The Office of Research, Innovation & Commercialization (ORIC) serves as the main hub for all university-wide research-related initiatives, Industry collaboration and commercialization.



Additionally, the ORIC is in charge of making sure that every aspect of the research meets the highest international standards and elevates the university's standing among the top research institutions in the world. In order to fulfill its mission, the ORIC must ensure that all research programs and policies uphold the fundamental principles of academic freedom, professional integrity, and ethical behavior. It must also ensure complete compliance with all university policies, legal obligations, and operational standards.

- ❖ Serve as an effective advocate for research and commercialization with the university and to its broader community of stakeholders and supporters.
- ❖ Overseeing all aspects of research and development efforts, including planning, budgeting, recruiting, training, etc.
- ❖ Conduct research and development (R&D) in a variety of fields, such as biotechnology, nanotechnology, and information technology.
- ❖ Prepare invoices, memos, letters, and other documents using word processing, spreadsheet, database or presentation software.
- ❖ Manage correspondence (e-mail) and respond in a timely and professional manner to all internal and external inquiries.
- ❖ Prepare, maintain, and update website materials.
- ❖ Filing and Prosecuting Patent Application.
- ❖ Keep the faculty updated with all internal and external available research opportunities.
- ❖ Compiling the research, innovation and commercialization activity record and publication of the ORIC annual report
- ❖ Production of the online journal/articles from receipt of manuscripts to online publication to an agreed standard of quality, cost, budgeted extent and to agreed schedules.
- ❖ Facilitate the university in matters related to Research Innovation and Commercialization.
- ❖ Promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy.
- ❖ Receiving and processing all administrative matters, facilitating requests received from the principal investigators/project awardees, matching them with approved proposals and forwarding them to the relevant administrative department for execution i.e. fund release from treasurer office etc.

- ❖ Develop and maintain research cores and infrastructure within the institute including web pages, internal grant review procedures, and statistical support.

Commending the above ORIC supports the Universities strategic Research Direction and Policies, promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy, Strengthening university-industry relationships etc.

1.7 Strategic Plan (5 – Year)

UCP – ORIC 5 Year’s strategic plan is as:

ORIC 5-Years Strategic Plan



Thrust Areas:

1.71 Annual Calendar

- ❖ Bi-Annual Meeting with Chamber of Commerce and Industry.
- ❖ Faculty, Researcher Meetings every month.
- ❖ 1-on-1 meetings with researcher on need basis.
- ❖ Quarterly meetings regarding Technology Transfer between industry and faculty.
- ❖ ORIC Steering Committee Meeting every quarter.

1. Enabling Environment for Research Culture.

2. Enhance Research Productivity

3. Creative Solutions for Social Impact and Sustainability

4. Research Networking

5. Fostering Innovation Eco-System

1.72 Action-Plan:

- ❖ Devising, implementation, and up gradation of remuneration policy for research publications in journals.
- ❖ Designing /implementation of Best Researcher & Innovator Award.
- ❖ Management of Ethical Institutional Review Board (IRBI).
- ❖ Research Groups formations for research coordination, interdisciplinary research, and national /international collaborations.
- ❖ Google Scholar/Scopus profiles of faculty members for monitoring and enhancement of citations.
- ❖ Participation in HEC research awards.
- ❖ Awareness campaign for national/ international grants and provide support for maximum submission of proposals.
- ❖ Organization of Conferences through relevant offices of faculties.

- ❖ Upgradation and value-addition in centralized research portal of university for monitoring and data analytics.
- ❖ Providing guidelines and publication Strategy through peer-peer meetings and interactions.
- ❖ Provide awareness with regard to journal metrics/indexing, and conference standings.
- ❖ Enhancement in R&D Project Activities

1.73 Expected Outcomes

<u>Short-Term</u>	<u>Mid-Term</u>	<u>Long-Term</u>
<ul style="list-style-type: none"> ❖ 10% Increase in impact Factor Publications. ❖ 10% Increase in Proposal Submission for National/International Grants. ❖ 10% Increase in Citations of University 	<ul style="list-style-type: none"> ❖ 20% Increase in impact Factor Publications. ❖ 20% Increase in Proposal Submission for National/International Grants. ❖ 20% Increase in Citations of University. 	<ul style="list-style-type: none"> ❖ 50% Increase in Impact Factor Publications. ❖ 50% Increase in proposal Submission for National/International Grants. ❖ 50% Increase in Citations of University.

1.74 Performance Indicators

- ❖ Number of patents granted.
- ❖ Number of research articles published in impact factor journals.
- ❖ Participation in number of conferences both national and international.
- ❖ Number of active agreements/ licenses /MOUs with local and international industry.
- ❖ Number of License Agreements, Consultancy Agreements, IP Rights signed by startups.
- ❖ Securing contractual research from the industry.
- ❖ Revenue generation through research commercialization.

1.75 Action Plan

- ❖ Engagement of a professional IP consultant for filing with IPO.
- ❖ Reviewing teaching workload of research faculty for giving them the opportunity to indulge in projects and producing impactful research.

- ❖ Industry placement of faculty from disciplines of pure sciences for enhancing their ability to produce advanced technological artifacts.
- ❖ Student engagement with industry for building their capacity, professional competencies and making them market ready.
- ❖ Rigorous, inclusive and diversified startup selection process.
- ❖ Enhancing UCP global footprint by leveraging the experience of international members in the UCP-ORC steering committee to build global linkages to secure research projects.

1.8 ORIC Steering Committee



ORIC steering committee comprise of members of senior executives or stakeholders responsible for providing guidance and direction to ORIC ongoing projects or initiatives. The purpose of the meeting is to discuss key issues, make strategic decisions, and ensure that the project or initiative is aligned with organizational goals.

1.81 Steering Committee Features

Some common features addressed in an ORIC Steering Committee Meeting are as:

- ❖ **Project Updates:**
Review progress reports and updates on the status of ongoing projects or initiatives.
- ❖ **Strategic Planning:**
Discuss and make decisions regarding the overall strategic direction of the organization or project.
- ❖ **Problem Solving:**

Address any challenges or issues that have arisen since the last meeting and work on solutions.

❖ **Future Planning:**

Discuss long-term goals, future projects, and potential areas for improvement.

1.82 Objectives of ORIC Steering Committee Meeting

- ❖ Devise & approve 5-year strategic plan & compliance.
- ❖ Review and approve recommendations for better achievement.
- ❖ Review periodic monitoring reports.
- ❖ Provide policy guidance to ORIC leadership.
- ❖ Ensure that ORIC activities/ initiatives are coordinated with relevant stakeholders, inside or outside the HEI.
- ❖ Bridge the gap between academia and industry.
- ❖ Advise VC/Head on the research management challenges of the university.
- ❖ Undertake any other task relevant to the better functioning of the ORIC.
- ❖ Rigorous, inclusive and diversified startup selection process
- ❖ Enhancing UCP's global footprint by international members in steering committee.

ORIC steering committee make financial decisions for the project and to measure progress against the specific objectives, milestones, and deliverables of each work package. Another goal is to create metrics to assess the impact of the work. They are in charge of overseeing the consolidation of the various project's data-infrastructure requirements and developing a joint policy on issues. Finally, to monitor the sustainability of the infrastructure components being developed and to develop a plan for support following the completion of the grant.

1.83 Terms of Reference (ToR) of ORIC Steering Committee Meeting

As per HEC ORIC policy 2023 following are the ToR of ORIC Steering Committee Meeting:

- ❖ The committee is established to provide oversight, guidance, and strategic direction to the Office of Research, Innovation, and Commercialization (ORIC).
- ❖ Reviewing and approving ORIC's annual plans and budgets.
- ❖ Monitoring the progress of research and innovation initiatives.
- ❖ Assessing the effectiveness of commercialization efforts.

- ❖ Ensuring alignment with the organization's mission and strategic priorities.

1.84 Conclusion

Steering committee meetings are instrumental in ensuring that large-scale projects or strategic initiatives stay on track, meet their objectives, and align with the organization's overall goals. They provide a forum for senior leadership and experts to provide guidance and make decisions that can have a significant impact on the project's success.

10 Steering Committees Meetings for ORIC at UCP, had been conducted to provide strategic leadership.

Meetings	Date
1	8th Feb, 2023
2	8th Mar, 2023
3	11th April, 2023
4	19th May, 2023
5	13th June, 2023
6	22nd June, 2023
7	30th June, 2023
8	25th Aug, 2023
9	26th Oct, 2023
10	14th Dec, 2023

1.9 ORIC Policies

UCP ORIC has designed policies for the it's smooth working. Details are mentioned below:

1.91 Research Remuneration Policy

In a bid to enhance research culture in the context of creative work, breakthrough findings, knowledge up-gradation, effective surveys & reviews, and innovative solutions of local market/industrial/societal research problems, the University of Central Punjab (UCP) always pay special emphasis on the publication of aforementioned research activities in quality impact factor journals. On the publication of research articles in impact factor journals, the UCP faculty members will be rewarded with a remuneration package, which moves in accordance with the journal ranking in its specific area as per the new HEC journal recognition system (HJRS). Further, the university will also accommodate faculty members in the payment of journal publication fees/article processing charges/extra pages' charges depending upon the ranking of a journal as per HJRS system.



The sponsorship fees for research publication in impact factor journal is based on the below mentioned criteria, if the journal's position is amongst the top 30% journals in its subject area position as per JPI defined by HJRS.

Eligibility Conditions & Filing of Remuneration Case:

- ❖ Faculty member must be full time University employee.
- ❖ Journal should be non – impact factor journal listed in WoS – JCR.
- ❖ Sole/ primary affiliation must be with UCP.
- ❖ The remuneration amount should be claimed in the same year in which the article is published.
- ❖ Maximum of up to 3rd position is applicable for UCP authors in the multi-author publication.

1.92 Best Researcher & Innovator Award (BRIA) Policy for Faculty Members of UCP

At the faculty level, the yearly appraisal form contains multiple aspects related to research and/or innovation parameters, which are processed to decide the yearly increment of faculty members. However, a uniform, well-documented, and comprehensive policy for the best researcher and innovator award (BRIA) at the university level or faculty level is non-existent. Despite the fact that the importance of such policy is being propagated by multiple stakeholders on different platforms of UCP, it is the need of the hour to produce the BRIA policy to enhance the research productivity and innovative work of UCP faculty members.



Details of the Award:

Level	Total Award(s)	Reward
BRIA at Faculty Level	9 (1 x Each Faculty)	Certificate & cash reward of PKRs: 50,000/-
BRIA at University Level	1	Certificate & cash reward of PKRs: 100,000/-

The cases of nominated faculty members will be presented to evaluation committee. The faculty member who wins the award at the university level, the faculty level award of his/her faculty will be automatically awarded to the second nominee. In case of tie between faculty members, the award will be jointly shared. The awards in favor of faculty members will be decided in the month of March every year. These awards will be distributed in the Pro-Rector's address to the faculty members of the university.

1.93 Ethical Review Committee (ERC)/ Institutional Review Board (IRB) for Research Activities of University of Central Punjab (UCP)

The Ethical Review Committee (ERC) or Institutional Review Board (IRB) is a regulatory body within institutional academic/research structure, where the group of individuals is formally appointed to scrutinize, review, and approve the proposed research studies/investigations in the context of maintaining the appropriate protocols of ethical standards in accordance with National/International rules & regulations.

Aims of ERC/IRB:

The main aims of ERC/IRB are:

- ❖ Overall governance and management to ensure quality assessment and original scholarly work in compliance with the ethical guidelines.
- ❖ Devising guidelines and relevant policies for the working model of ERC/IRB.
- ❖ The protection of humans, living species, and environmental impact.
- ❖ Withdrawal of research approval if dissatisfied with the conduct of the investigation.



Terms of References (ToRs) of the institutional ERC/ IRB

- ❖ Implementation of ethical standard policy at the university level.
- ❖ Procedural mechanism with sequential flow and guidance for the research applicants to submit their initial, ongoing, final report and publication research studies for review.
- ❖ Protection of study subjects (animals, human beings, environment) and adherence to ethical values throughout the research project should be ensured.
- ❖ Proposed research study is scientifically sound and original by reviewing the study related contents and materials.
- ❖ Conduct unbiased effective review at different stages of research studies: Preliminary designing study, on-going methodology, final report after trials is completed, and publication.

1.94 Consultancy Services by UCP Faculty and staff to Industries

Universities are reservoirs of value-added human capital, whose engagement with the industry is extremely important to promote innovation and make societal impact. University Faculty Members (FM)/ Staff providing expert advice to external clients is a prominent form of 3rd mission activity, in which higher education institutions



promote and support productive contact with the industry. Offering expert advice, advising on technical challenges, and addressing problems for industrial are all examples of consultancy services. Consultancy services aids in penetrating into the industry, leading to the advancement of University-Industry Linkages in areas such as research, trainings and internships.

Objectives:

To delineate the contours of policy guidelines facilitating UCP faculty members and staff to engage with consultancy services with industry and external clients on commercial terms.

Purpose:

- ❖ Consultancy provide external stimulus that is helpful for teaching and training.
- ❖ It often leads towards other forms of partnerships including research projects.
- ❖ Helps in development of useful contacts, marketing opportunities and improved reputation of the institution.
- ❖ Provides revenue, and diversifies sources of income for the institution.
- ❖ Helps in their personal development and creates new professional opportunities for them.

Consultancy while being a part of UCP:

After meetings all the expenditures incurred in the consultancy service, the balance amount will be distributed as:

Faculty Members/ Staff	80% (Distribution formula amongst the team member, if applicable is to be given by PI and endorsed by Dean)
UCP	20%

1.95 UCP Research Journals

In pursuit of making the University of Central Punjab (UCP) as a reputed publisher of peer-reviewed international journals for scholarly work, it is imperative to develop an effective



infrastructure for publishing of journals through comprehensive guidelines. By regular publishing the volumes/issues of journals, not only the in-house research culture of the university is envisaged to be improved but also pave the way for greater societal contribution as well as international recognition.

Aim:

- ❖ It is intended that all journals of UCP shall achieve the benchmark of HEC-Y category recognition as per new HJRS system.
- ❖ Achieve better HEC categories through indexing of journals in Scopus and Emerging Sources Citation Index (ESCI) -Web of Science (WoS).
- ❖ Get listed in Journal Citation Report (JCR) of WoS and the attainment of impact factor.

Process of Publishing in UCP Journals:

- ❖ Web based publication process and webhosting.
- ❖ Call for papers and frequency of publications.
- ❖ Abstracting and indexing.
- ❖ ISSN Number.
- ❖ Authorships and number of papers per issue.
- ❖ Peer-review process.
- ❖ Open-Access option, article processing charges and subscription fees.
- ❖ Licensing, contents & copyrights.

1.96 UCP Conferences



For the legacy of the institute in terms of research coverage, linkage, collaboration, new ideas sharing platform, and engagement of key figures, the execution of consistent and reputable national-international conference/symposium research events are inevitable. In this regard, the efforts and resources are needed to produce the enabling environment for patronage and support of organizing the conferences at the university.

Aim:

To develop such policy which gives extensive guidelines and direction for the organization of the high-quality conference of international standards. This, in-turn, will build UCP as a reputed brand for meetup of well-known figures, platform of nurturing new ideas, and influx of quality papers.

Procedural Mechanism:

- ❖ All international/national level conferences will be organized as per the SOP provided by ORIC office, which provides details related to guidelines, schedule/timeline, budget estimation, post event actions and report, in line with HEC/UCP requirements.
- ❖ All conference activities shall be prepared at least 5 months in advance.
- ❖ All history of the conference and proceeding should remain archived online and linked to subsequent conferences.

Filing Phases:

- ❖ Form A – Application Form.
- ❖ Form B – Estimated Budget.
- ❖ Form C – Post Event Reporting for the organization of the UCP conference.

Chapter No. 2

Overview of Research at UCP

Research is a tool for building knowledge and for facilitating learning. It plays a pivotal role in making universities competitive worldwide. Quality research enables universities to explore organizational and societal issues to identify or suggest solutions.

ORIC at UCP foster Research and Development by creating a suitable research-oriented atmosphere where scholars can collaborate and develop cutting edge research-based technologies. With the aim of promoting and strengthening research culture in the university, Directorate of



Research of UCP primarily design, develop, manage, and control process of Research, in order to develop a stimulating research environment at UCP through which faculty members can build their profile and career around impact & market-oriented research. In order to facilitate faculty and students regarding conducting research, the directorate formulates new policies and updates the existing ones. It also manages to conduct training workshops to equip the faculty and students with advanced research skills. In addition, the directorate continuously monitors the research output of faculty members via its own state of the art research portal. Also, the faculty members who come out to be outstanding researchers are encouraged through a publication remuneration award.

UCP has expanded the dimensions of applied research and experimental development during the past year, redefining the scope and direction of its research efforts to provide creative solutions for social and industrial concerns. This action is consistent with the Chairman's goal of developing a vibrant community of researchers and students committed to helping our country and using their ingenuity and resourcefulness to solve challenging social and commercial issues. The research department of UCP is now closely allied with industry and policy in order to fulfill its proper place

in Pakistan's national innovation system and to enhance its abilities for innovative as well as significant research output.

In addition, UCP is promoting transdisciplinary research across overlapping topics from other faculties through numerous projects. Research groups have been established for the objective of exchanging diverse knowledge and developing practical solutions to address social issues.

At UCP, the qualifications for a PhD degree and remuneration policies are being redesigned with a focus on publications that have an impact factor and are indexed by Scopus. Encouraging UCP researchers to publish in more famous publications is one of the main objectives of this, since it may eventually help the university's standing in Asia and worldwide rankings.

2.1 Research Goals

Research publications and journals serve several important goals in the academic and scientific community. Here are some key objectives and benefits associated with research publications and journals:

- ❖ Disseminating research results allows others in the field to build upon existing knowledge, fostering a cumulative and collaborative approach to scientific progress.
- ❖ Peer-reviewed publications help maintain the credibility of scientific work by subjecting it to critical evaluation by experts in the field.
- ❖ Publishing in reputable journals contributes to a researcher's professional standing, recognition, and career advancement.
- ❖ Allow researchers to participate in academic discussions, present their perspectives, and contribute to the development of theories, methodologies, and concepts.
- ❖ Publications are often essential for obtaining academic degrees, securing research grants, and meeting the criteria for academic promotion and tenure.
- ❖ Journals serve as archives of scientific knowledge, providing a historical record of research that can be accessed by future generations of scholars.
- ❖ Publications provide a benchmark for comparing research methodologies, results, and conclusions, allowing researchers to build on and refine existing approaches.

Overall, research publications and journals play a crucial role in advancing knowledge, fostering collaboration, and maintaining the integrity of the scientific process. They are integral to the growth and development of academic and scientific disciplines.

2.2 Research Annual Publications (2022)

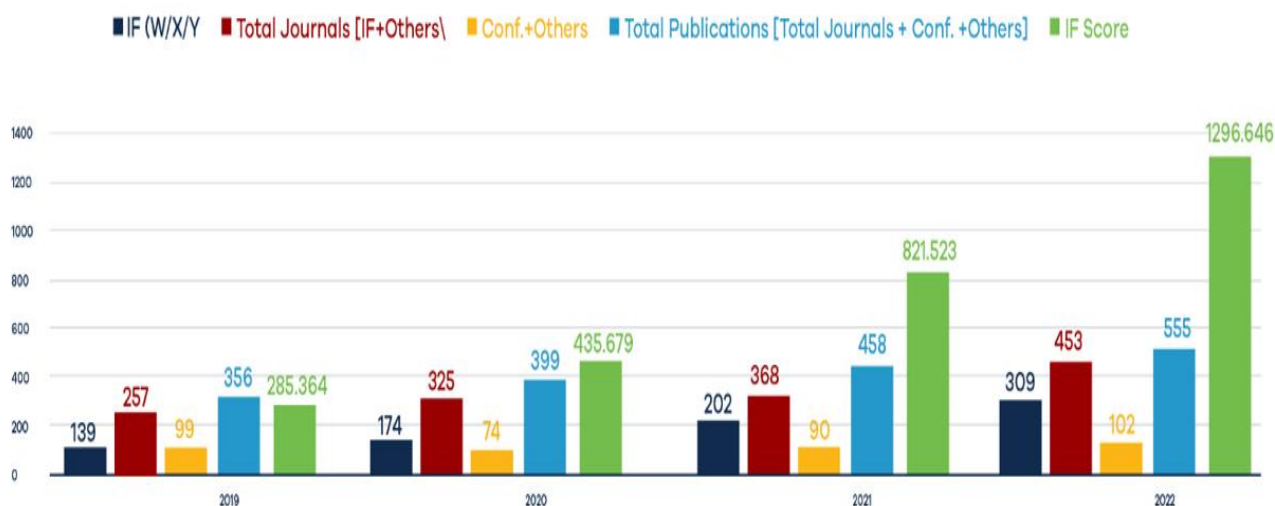
Faculty members and students at UCP published **555** publications in **2022–2023**, of which **453** and **102** were **journal papers** and **conference papers**, respectively. Of these articles, **309** research papers were published in **impact factor journals**, which are regarded by the scientific community as the highest caliber and most reliable sources of research. These articles also result in citation impact; as of right now, eight UCP faculty members have cumulative impact factors over 100.

UCP Achievements of Publications-Year-2022

Total Publications 550+		Tot Pub Δ% +20%
IF Pub 300+	IF Score 1000+	IF Pub Δ% +50%
IF Pub FOST: 170+ FOMS: 40+ FOPS: 30+ FOE: 30+ FOIT: 10+ FHSS/FLL: 10		IF Score FOST: 750+ FMS: 190+ FOPS: 130+ FOE: 90+ FOIT: 40+ FHSS/FLL: 20+

2.3 Graphical Representation for last 4 – Years

University of Central Punjab (UCP)



2.4 Faculty wise Research Publications for Year 2023

1. Faculty of Science & Technology (FOST)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Muhammad Afzal & Dr. Muhammad Naveed	Associate Professor & HoD/ Associate Professor	W	Molecules	4.927	HPLC, FTIR and GC-MS Analyses of Thymus vulgaris Phytochemicals Executing In Vitro and In Vivo Biological Activities and Effects on COX-1, COX-2 and Gastric Cancer Genes Computationally
2	Dr. Muhammad Afzal & Dr. Muhammad Naveed	Associate Professor & HoD/ Associate Professor	X	Chemistry Select	2.307	Phytochemical Profiling, Biological Activities and In Silico Virtual Screening of Bioactive Compounds of Trichodesma Indicum (L) R. Br. Extracts
3	Dr. Sumera Zaib	Associate Professor/HoD	W	Journal of Infection and Public Health	7.537	Designing multi-epitope monkeypox virus-specific vaccine using immunoinformatics approach
4	Dr. Muhammad Naveed	Associate Professor/HoD	X	Bioengineering	5.046	Chain-Engineering-Based De Novo Drug Design against MPXVgp169 Virulent Protein of Monkeypox Virus: A Molecular Modification Approach
5	Dr. Muhammad Naveed	Associate Professor/HoD	W	Molecules	4.927	Genome Investigation and Functional Annotation of Lactiplantibacillus plantarum YW11 Revealing Streptin and Ruminococcin-A as Potent Nutritive Bacteriocins against Gut Symbiotic Pathogens

6	Muhammad Saad Tariq	Senior Lecturer	X	ECS Journal of Solid State Science and Technology	2.483	Elucidating the Effect of Pressure on Structural, Electronic, Magnetic, Mechanical and Thermal Properties of Mn ₂ ZrZ (Z=Ge and Si): DFT Overview
7	Muhammad Asim Farooq	Lecturer	W	The European Physical Journal Plus	3.758	Evolution of expansion-free massive stellar object in f(R, T) gravity
8	Dr. Muhammad Afzal	Associate Professor	W	Molecules	4.923	Characterization of Bioactive Compounds and Novel Proteins Derived from Promising Source Citrullus colocynthis along with In-Vitro and In-Vivo Activities
9	Dr. Zain Ul Abadin Zafar	Assistant Professor	W	Physica A: Statistical Mechanics and its Applications	3.778	Stochastic suicide substrate reaction model
10	Dr. Muhammad Sajid Manzoor & Dr. Shoaib Younas	Assistant Professor	X	International Food Research Journal	1.169	Phenolic acid profile of oat cultivars, and their suppressive effect on intracellular reactive oxygen species
11	Dr. Muhammad Riaz	Assistant Professor	X	Chemistry and Biodiversity	2.745	Chemical Characterization, Antioxidant, Antimicrobial, Cytotoxicity and in Silico Studies of Hexane Extract and Essential Oils from Citrus limon Leaves
12	Dr. Sumera Zaib	HOD/Associate Professor	W	Molecules	4.927	Ultrasound-Assisted Synthesis of Piperidinyl-Quinoline Acylhydrazones as New Anti-Alzheimer's Agents: Assessment of Cholinesterase Inhibitory Profile, Molecular Docking Analysis, and Drug-like Properties
13	Dr. Sumera Zaib	HOD/Associate Professor	X	ChemistrySelect	2.307	Evaluating the Anti-Gastric Ulcer Activity of Aegle marmelos: A Brief Review

14	Dr. Saba Kabir	Assistant Professor	W	Journal of King Saud University - Science	3.829	Effect of tellurite on growth of extensively drug resistant (XDR) Mycobacterium tuberculosis and action on mycobacterial drug efflux pump
15	Dr. Zain Ul Abadin Zafar	Assistant Professor	X	Journal of Taibah University for Science	3.459	Numerical analysis of Bazykin–Berezovskaya model
16	Ammara Masood & Hira Mubeen	Senior Lecturer & Assistant Professor	X	Pakistan Journal of Botany	1.101	Atp Synthase Subunits: Structure And Role In Plants Under Stress Conditions
17	Aatif Amin	Assistant Professor	Y	Current Microbiology	2.343	Evaluation of Antimicrobial Effect of Silver Nanoparticle Based Whey Emulsions and Edible Films for the Extension of Shelf Life of Fruits and Vegetables
18	Dr. Hafiza Rizwana Kausar	Dean	W	European Physical Journal C	4.994	Warm inflation in hybrid metric-Palatini gravity under standard and irreversible thermodynamical approach
19	Muhammad Saad Tariq	Senior Lecturer	X	International Journal of Quantum Chemistry	2.437	The optoelectronic application of CsSnI ₃ upon substitution with Pb: A DFT approach
20	Dr. Muhammad Naveed	HoD/Associate Professor	W	Biomedicines	4.757	Artificial Intelligence Assisted Pharmacophore Design for Philadelphia Chromosome-Positive Leukemia with Gamma-Tocotrienol: A Toxicity Comparison Approach with Asciminib

21	Dr. Muhammad Naveed	HoD/Associate Professor	W	Biomedicines	4.757	Identification of Bacterial Strains and Development of anmRNA-Based Vaccine to Combat Antibiotic Resistance in Staphylococcus aureus via In Vitro and In Silico Approaches
22	Dr. Hafiz Shoaib Sarwar	Assistant Professor	W	Saudi Pharmaceutical Journal	4.562	Formulation and characterization of thiolated chitosan/polyvinyl acetate based microneedle patch for transdermal delivery of dydrogesterone
23	Dr. Sumera Zaib	HoD/Associate Professor	X	ChemistrySelect	2.307	An Evaluation of Biomarkers as Determinants of Peripheral Arterial Disease in those with Diabetes Mellitus
24	Dr. Sumera Zaib	HoD/Associate Professor	W	Mini-Reviews in Medicinal Chemistry	3.737	Role of Human Papillomavirus in Various Cancers: Epidemiology, Screening and Prevention
25	Dr. Sumera Zaib	HoD/Associate Professor	W	Royal Society Open Science	3.653	N-Arylacetamide derivatives of methyl 1,2-benzothiazine-3-carboxylate as potential drug candidates for urease inhibition
26	Dr. Sumera Zaib	HoD/Associate Professor	X	Journal of Molecular Structure	3.841	Insight into structural topology and supramolecular assembly of tetrahydrocarbazole-carbonitrile: On the importance of noncovalent interactions and urease inhibitory profile
27	Dr. Sumera Zaib	HoD/Associate Professor	W	Molecules	4.927	Identification of Potential Inhibitors for the Treatment of Alkaptonuria Using an Integrated In Silico Computational Strategy
28	Dr. Khalida Naseem	Assistant Professor	X	Environmental Progress and Sustainable Energy	2.824	Thermo-chemical conversion of pre-treated cucumber peel

29	Dr. Muhammad Afzal	Associate Professor	W	Molecules	4.927	Synthesis, Characterization and Biological Activities of Zinc Oxide Nanoparticles Derived from Secondary Metabolites of <i>Lentinula edodes</i>
30	Muhammad Saad Tariq	Senior Lecturer	W	Optical and Quantum Electronics	2.794	Elucidating the effect of Pb and Ba substitution in SrTcO ₃ for advanced radioactive semiconducting applications
31	Dr. Muhammad Rafiq	Professor	W	Computers, Materials & Continua	3.86	New Trends in Fuzzy Modeling Through Numerical Techniques
32	Dr. Muhammad Rafiq	Professor	X	Intelligent Automation & Soft Computing	3.401	Numerical Analysis for the Effect of Irresponsible Immigrants on HIV/AIDS Dynamics
33	Dr. Muhammad Naveed & Dr. Shafiq Ur Rehman	HoD/Associate Professor & Associate Professor	W	Molecules	4.927	Biosynthesis and Mathematical Interpretation of Zero-Valent Iron NPs Using <i>Nigella sativa</i> Seed Tincture for Indemnification of Carcinogenic Metals Present in Industrial Effluents
34	Dr. Muhammad Naveed	HoD/Associate Professor	W	Frontiers in Microbiology	6.064	Integrated genome based evaluation of safety and probiotic characteristics of <i>Lactiplantibacillus plantarum</i> YW11 isolated from Tibetan kefir
35	Izzah Shahid	Lecturer	W	3 Biotech	2.893	Genome mining of <i>Pseudomonas</i> spp. hints towards the production of under-pitched secondary metabolites
36	Izzah Shahid	Lecturer	Y	Anti-Cancer Agents in Medicinal Chemistry	2.527	In-silico Evaluation of Novel Honokiol Derivatives against Breast Cancer Target Protein LKB1

37	Dr. Sumera Zaib	HoD/Associate Professor	X	ChemistrySelect	2.307	Neurodegenerative Diseases: Their Onset, Epidemiology, Causes and Treatment
38	Dr. Muhammad Naveed & Dr. Shafiq Ur Rehman	HoD/Associate Professor & Associate Professor	W	ACS Omega	4.132	Molecular Characterization of spa, hld, fmhA, and lukD Genes and Computational Modeling the Multidrug Resistance of Staphylococcus Species through Callindra harrisii Silver Nanoparticles
39	Dr. Khalida Naseem	Assistant Professor	X	International Journal of Polymeric Materials and Polymeric Biomaterials	3.221	Enzymes encapsulated smart polymer micro assemblies and their tuned multi-functionalities: a critical review
40	Dr. Khalida Naseem	Assistant Professor	X	Zeitschrift fur Physikalische Chemie	4.315	Investigating adsorptive potential of Raphanus caudatus leaves biomass for methyl orange dye: isotherm and kinetic study
41	Dr. Shafiq Ur Rehman	Associate Professor	Y	Tobacco Regulatory Science	2.024	In Silico analysis of SOX2 genes mutations in Leukemia Patients through Ecosystem approach
42	Dr. Sumera Zaib	HoD/Associate Professor	W	Mini-Reviews in Medicinal Chemistry	3.8	Analyzing the Challenges, Consequences, and Possible Treatments for Polycystic Ovary Syndrome
43	Dr. Sumera Zaib	HoD/Associate Professor	W	Mini-Reviews in Medicinal Chemistry	3.8	Probiotics and their beneficial health effects
44	Dr. Sumera Zaib	HoD/Associate Professor	X	Journal of Molecular Structure	3.8	Complex interplay of hydrogen bonding, halogen bonding and π -interactions in methyl 2-(7-chloro-1H-pyrazolo[3,4-b]quinolin-1-yl)acetate: Synthesis, X-ray crystallography, energetic features and anti-urease efficacy

45	Dr. Sumera Zaib	HoD/Associate Professor	X	Anti-Cancer Agents in Medicinal Chemistry	2.8	Silybum marianum: an overview of its phytochemistry and pharmacological activities with emphasis on potential anticancer properties
46	Dr. Muhammad Naveed	HoD/Associate Professor	W	Frontiers in Microbiology	5.2	Comparative genomics of food-derived probiotic Lactiplantibacillus plantarum K25 reveals its hidden potential, compactness, and efficiency
47	Dr. Muhammad Naveed	HoD/Associate Professor	X	European Review for Medical and Pharmacological Sciences	3.3	Revolutionizing treatment for toxic shock syndrome with engineered super chromones to combat antibiotic-resistant Staphylococcus aureus
48	Dr. Muhammad Naveed	HoD/Associate Professor	X	Acta Biochimica Polonica	2.349	A reverse vaccinology approach to design an mRNA-based vaccine to provoke a robust immune response against HIV-1
49	Dr. Muhammad Naveed	HoD/Associate Professor	X	European Review for Medical and Pharmacological Sciences	3.3	A pharmacophore screening approach of homeopathic phenols for a renovated design of fragment-optimized Bauhiniastatin-1 as a drug against acromegaly
50	Dr. Abdul Rauf Nizami & Dr. Muhammad Rafiq	Associate Professor & Professor	W	The European Physical Journal Plus	3.4	Transmission of SARS-CoV-2 on Barabasi-Albert Network under Constant and Variable Rates of Infection
51	Dr. Muhammad Akhyar Farrukh	Professor	X	Journal of the Chinese Chemical Society	1.8	Comparison of photocatalytic and antibacterial activities of allotropes of graphene doped Sm ₂ O ₃ nanocomposites: optical, thermal and structural studies

52	Dr. Muhammad Akhyar Farrukh	Professor	Y	Russian Journal of Physical Chemistry A	0.7	Facile synthesis of Gd ₂ O ₃ /rGO nanocomposite: optical, thermal, morphological, structural, and catalytic studies
53	Dr. Zain Ul Abadin Zafar	Assistant Professor	X	Ricerche di Matematica	1.2	A note on weakly σ -n-embedded subgroups of σ -full groups
54	Dr. Muhammad Akhyar Farrukh	Professor	W	Catalysts	3.9	The Impact of Different Green Synthetic Routes on the Photocatalytic Potential of FeSnO ₂ for the Removal of Methylene Blue and Crystal Violet Dyes under Natural Sunlight Exposure
55	Dr. Muhammad Afzal & Dr. Izzah Shahid	Associate Professor & Lecturer	X	Dose-Response	2.5	Pharmacological Activities and In-Silico Studies of Bioactive Compounds Identified in Organic Fractions of the Methanolic Extract of Citrullus Colocynthis
56	Dr. Muhammad Naveed	HoD/Associate Professor	X	European Review for Medical and Pharmacological Sciences	3.3	Side chain inset of neurogenerative amino acids to metalloproteins: a therapeutic signature for huntingtin protein in Huntington's disease
57	Dr. Muhammad Naveed	HoD/Associate Professor	X	European Review for Medical and Pharmacological Sciences	3.3	A one-health approach to design an mRNA-based vaccine candidate against the lumpy skin disease virus as an alternative to live-attenuated vaccines
58	Mehak Rubab Kazmi, Dr. Shafiq Ur Rehman & Dr. Sadia Zulfiqar	Associate lecturer, Associate Professor & Assistant Professor	Y	Tobacco Regulatory Science	2.024	Study of association between elevated cardiac markers with cardiac arrest
59	Dr. Muddasir Ali Shah	Associate Professor	X	AIP Advances	1.6	Role of electron temperature at extremely low density in negative positive ion plasma

60	Dr. Sumera Zaib	HoD/Associate Professor	W	Molecules	4.6	Identification of Potent Inhibitors Targeting EGFR and HER3 for Effective Treatment of Chemoresistance in Non-Small Cell Lung Cancer
61	Dr. Sumera Zaib	HoD/Associate Professor	W	PLoS ONE	3.7	Design and synthesis of novel anti-urease imidazothiazole derivatives with promising antibacterial activity against Helicobacter pylori
62	Muhammad Saad Tariq & Muhammad Saleem	Lecturer	X	Chemical Papers	2.2	Pressure-induced effects on PrAO ₃ (A = Cr and Fe) ferromagnets: a DFT study for spintronic and energy storage devices
63	Muhammad Saleem	Lecturer	X	Journal of Food and Nutrition Research	1.1	Vitamin C and Phenolic Compounds in Fruit Peel and Pulp Waste
64	Dr. Muhammad Naveed	HoD/Associate Professor	X	European Review for Medical and Pharmacological Sciences	3.3	Halogens engineering-based design of agonists for boosting expression of frataxin protein in Friedreich's ataxia
65	Muhammad Saad Tariq	Lecturer	X	Transition Metal Chemistry	1.7	Deciphering the impact of pressure on the electronic, mechanical, and structural properties of PrMnO ₃ through density functional theory analysis
66	Dr. Khalida Naseem	Assistant Professor	X	Inorganic Chemistry Communication	3.8	Role of bioinorganic metal nanoparticles as catalyst for the treatment of dyes polluted wastewater
67	Dr. Khalida Naseem	Assistant Professor	W	International Journal of Environmental Science and Technology	3.1	Biogenic synthesized nanocatalysts and their potential for the treatment of toxic pollutants: environmental remediation, a review

68	Dr. Khalida Naseem	Assistant Professor	X	Zeitschrift fur Physikalische Chemie	2.5	Towards sustainable water purification: MOFs as a promising solution to eliminate toxic water pollutant resorcinol
69	Dr. Zain Ul Abadin Zafar	Assistant Professor	W	Results in Physics	5.3	Numerical simulation and analysis of the stochastic HIV/AIDS model in fractional order
70	Dr. Muhammad Afzal & Dr. Tanzeela Riaz	Associate Professor & Associate Professor	X	ChemistrySelect	2.1	Characterization of Secondary Metabolites Identified in Lentinula edodes and Determination of Their Biological Activities by in-silico Antioxidant Screening
71	Dr. Sumera Zaib	HoD/Associate Professor	W	AAPS PharmSciTech	3.3	Fabrication and Evaluation of Anticancer Potential of Eugenol Incorporated Chitosan-Silver Nanocomposites: In Vitro, In Vivo, and In Silico Studies
72	Dr. Sumera Zaib	HoD/Associate Professor	X	Journal of Molecular Structure	3.8	Cooperative assemblies featuring hydrogen bonding and C-H... π interactions in 2-(methanesulfonamido)benzohydrazide derivatives: Experimental, computational and biochemical assessment
73	Dr. Sumera Zaib	HoD/Associate Professor	W	Bioorganic Chemistry	5.1	Pyrimidine-morpholine hybrids as potent druggable therapeutics for Alzheimer's disease: Synthesis, biochemical and in silico analyses
74	Dr. Muhammad Naveed & Dr. Shafiq Ur Rehman	HoD/Associate Professor & Associate Professor	W	ACS Omega	4.1	Synthesis of Iron Oxide Nanoparticles from Madhuca indica Plant Extract and Assessment of Their Cytotoxic, Antioxidant, Anti-Inflammatory, and Anti-Diabetic Properties via Different Nanoinformatics Approaches

75	Dr. Muhammad Naveed	HoD/Associate Professor	X	Acta Biochimica Polonica	2.349	In silico explorations of bacterial mercuric reductase as an ecofriendly bioremediator for noxious mercuric intoxications
76	Dr. Muhammad Naveed	HoD/Associate Professor	X	Acta Biochimica Polonica	2.349	CRISPR-Cas9 guided RNA based model for the treatment of Amyotrophic Lateral Sclerosis: A progressive neurodegenerative disorder
77	Dr. Muhammad Naveed	HoD/Associate Professor	X	Journal of Biomolecular Structure and Dynamics	4.4	Designing a novel chimeric multi-epitope vaccine subunit against Staphylococcus argenteus through artificial intelligence approach integrating pan-genome analysis, in vitro identification, and immunogenicity profiling
78	Muhammad Awais	Senior Lecturer	W	Gene	3.5	Molecular identification of missense variants in SLC3A1 gene; an approach leading to computer-aided drug design for cystinuria
79	Dr. Muhammad Rafiq	Professor	W	Expert Systems with Applications	8.5	Computationally efficient optimal control analysis for the mathematical model of Coronavirus pandemic
80	Dr. Muhammad Rafiq	Professor	W	Results in Physics	5.3	Optimally analyzed fractional Coronavirus model with Atangana–Baleanu derivative
81	Dr. Muhammad Rafiq	Professor	W	Scientific Reports	4.6	A reliable numerical investigation of an SEIR model of measles disease dynamics with fuzzy criteria
82	Dr. Sumera Zaib	HoD/Associate Professor	X	Mini-Reviews in Medicinal Chemistry	3.8	Purinergic Signaling and its Role in the Stem Cell Differentiation

83	Dr. Sumera Zaib	HoD/Associate Professor	W	International Journal of Biological Macromolecules	8.2	Discovery of druggable potent inhibitors of serine proteases and farnesoid X receptor by ligand-based virtual screening to obstruct SARS-CoV-2
84	Dr. Salma Batool	Assistant Professor	X	Mini-Reviews in Organic Chemistry	2.3	Anti-inflammatory Alkaloids Targeting IL-1 against Respiratory Viral Infections: A Special Insight into Drug Development against SARS-CoV-2
85	Dr. Muhammad Naveed	HoD/Associate Professor	X	Acta Biochimica Polonica	2.349	An mRNA-based reverse-vaccinology strategy to stimulate the immune response against Nipah virus in humans using fusion glycoproteins
86	Dr. Amina Arif	Associate Professor	W	Biosensors and Bioelectronics	12.6	Tailoring molecular recognition in predesigned multifunctional enzyme mimicking porphyrin imprinted interface for high affinity and differential selectivity; sensing etoposide in lung cancer patients
87	Dr. Amina Arif	Associate Professor	X	Chelonian Conservation and Biology	0.7	Tracking molecular response of tyrosine kinase inhibitors therapy in chronic myeloid leukemia patients using rt-pcr profiling of bcr-abl transcripts
88	Dr. Hafiza Rizwana Kausar & Dr. Amal Majid	Dean & Assistant Professor	X	International Journal of Geometric Methods in Modern Physics	1.8	Comparison of energy conditions in general relativity and modified theories of gravity

89	Dr. Khalida Naseem	Assistant Professor	X	Zeitschrift fur Physikalische Chemie	2.5	Raphanus caudatus biomass powder as potential adsorbent for the removal of crystal violet and Rhodamine B dye from wastewater
90	Dr. Khalida Naseem	Assistant Professor	W	Journal of Molecular Structure	3.8	Inorganic nanoparticles fabricated alginate based nanocomposites for the treatment of brilliant blue dye
91	Dr. Sumera Zaib	HoD/Associate Professor	W	Frontiers in Pharmacology	5.6	Preparation and investigation of a novel combination of Solanum nigrum-loaded, arabinoxylan-cross-linked β -cyclodextrin nanosponges for the treatment of cancer: in vitro, in vivo, and in silico evaluation
92	Dr. Sumera Zaib	HoD/Associate Professor	W	International Journal of Biological Macromolecules	8.2	Fabrication and evaluation of anticancer potential of diosgenin incorporated chitosan-silver nanoparticles; in vitro, in silico and in vivo studies
93	Dr. Tanzeela Riaz	Associate Professor	X	Pakistan Journal of Zoology	0.6	Sublethal Doses of Clove Oil Deplete the Energy Reserves and Downregulate the Carbohydrate Metabolizing Enzymes in the 4th Instar Larvae of Trogoderma granarium
94	Dr. Muhammad Rafiq	Professor	W	Computers, Materials and Continua	3.1	A Nonstandard Computational Investigation of SEIR Model with Fuzzy Transmission, Recovery and Death Rates

95	Dr. Abdul Rauf Nizami & Dr. Muhammad Rafiq	Associate Professor & Professor	W	European Physical Journal Plus	3.4	Numerical simulations with mitigation strategies on Barabási–Albert network for the spread of coronavirus in Pakistan
96	Dr. Muhammad Naveed	HoD/Associate Professor	X	Biomass Conversion and Biorefinery	4	Exploring the potential application of peroxidase enzyme from <i>Acinetobacter baumannii</i> as an eco-friendly agent for the bioremediation of the highly noxious pyrethroid compounds through molecular docking analysis
97	Dr. Hafiz Rizwan Sharif	Associate Professor	W	International Journal of Food Properties	2.9	Potential industrial and nutritional applications of shrimp by-products: a review
98	Dr. Hafiz Rizwan Sharif	Associate Professor	W	Food Reviews International	6.043	New Insights into Health-Promoting Effects of Nobiletin from Citrus Fruits
99	Dr. Zain Ul Abadin Zafar	Assistant Professor	W	Heliyon	4	The analysis of a new fractional model to the Zika virus infection with mutant
100	Dr. Sumera Zaib	HoD/Associate Professor	W	Journal of Molecular Structure	3.8	Targeting carbonic anhydrases II/IX/XII with novel series of coumarin-based compounds: Synthesis, biological activity and molecular dynamics analysis
101	Dr. Salma Batool	Assistant Professor	X	Plant Stress	5	A Decade of Progress in Rhizoengineering to Exploit Plant Microbiome for Salinity Amelioration
102	Dr. Muhammad Riaz	Assistant Professor	Y	Open Chemistry	2.3	Characterization and antioxidant potential of white mustard (<i>Brassica hirta</i>) leaf extract and stabilization of sunflower oil

103	Dr. Muhammad Sajid Manzoor	Assistant Professor	W	PLoS ONE	3.7	Expression of IFN-Gamma is significantly reduced during severity of covid-19 infection in hospitalized patients
104	Muhammad Saad Tariq	Senior Lecturer	W	Journal of Computational Chemistry	3	DFT insights into LaFeO ₃ with Mn substitution: A promising path to energy-efficient magneto-optical applications

2. Faculty of Information Technology & Computer Science (FOIT&CS)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Muhammad Umair & Dr. Zafar Saeed	Assistant Professor	W	Computers, Materials and Continua	3.86	Energy Theft Detection in Smart Grids with Genetic Algorithm-Based Feature Selection
2	Dr. Mohsin Ashraf	Assistant Professor	W	Applied Sciences	2.838	A Hybrid CNN and RNN Variant Model for Music Classification
3	Dr. Rabia Tehseen	Assistant Professor	W	Education and Information Technologies	3.666	Learning analytics in programming courses: Review and implications
4	Dr. Rabia Tehseen	Assistant Professor	W	IEEE Access	3.476	FFM: Flood Forecasting Model using Federated Learning
5	Ahmad Arslan	Senior Lecturer	W	IEEE Access	3.476	E-DRAFT: An Efficient Data Retrieval and Forwarding Technique for Named Data Network Based Wireless Multimedia Sensor Networks
6	Faizan Ahmed Khan	Associate Lecturer	W	Journal of Computational Science	3.817	Intelligent Optimization of Reference Evapotranspiration (ET _o) for Precision Irrigation

7	Dr. Muhammad Adnan Aziz	Associate Professor	X	Mobile Information Systems	1.863	Cognitive Lightweight Logistic Regression-Based IDS for IoT-Enabled FANET to Detect Cyberattacks
8	Dr. Rabia Tehseen	Assistant Professor	W	Digital Health	4.687	Role of Internet of things in diabetes healthcare: Network infrastructure, taxonomy, challenges, and security model
9	Saeed Iqbal Khattak	Assistant Professor	W	Archives of Computational Methods in Engineering	8.171	On the Analyses of Medical Images Using Traditional Machine Learning Techniques and Convolutional Neural Networks
10	Dr. Rabia Tehseen	Assistant Professor	W	Scientific Reports	4.997	Detection of autism spectrum disorder (ASD) in children and adults using machine learning
11	Ahmad Arsalan	Senior Lecturer	W	Elsevier Ad Hoc Networks	4.816	Reduced network forwarding with controller enabled named software defined Internet of Mobile Things
12	Dr. Hafiz Mahfooz Ul Haque	Honorary Associate Professor	W	Internet of Things	5.9	A context-aware multi-agent reasoning based intelligent assistive formalism
13	Dr. Saira Andleeb Gillani	Professor	W	ISA Transactions	5.911	An autonomous decision-making framework for gait recognition systems against adversarial attack using reinforcement learning
14	Dr. Saira Andleeb Gillani	Professor	X	Journal of Database Management	2.656	Secure Gait Recognition-Based Smart Surveillance Systems Against Universal Adversarial Attacks
15	Dr. Saira Andleeb Gillani	Professor	W	Journal of Supercomputing	2.557	POSNet: a hybrid deep learning model for efficient person re-identification

16	Ahmad Arslan	Senior Lecturer	W	IEEE Access	3.9	A Comprehensive Survey on the Cooperation of Fog Computing Paradigm-Based IoT Applications: Layered Architecture, Real-Time Security Issues, and Solutions
17	Dr. David Samuel Bhatti	Assistant Professor	W	IEEE Access	3.9	Designing S-Box Using Tent-Sine Chaotic System While Combining the Traits of Tent and Sine Map
18	Dr. Aminullah	Assistant Professor	X	Complex & Intelligent Systems	5.8	Smart cities: the role of Internet of Things and machine learning in realizing a data-centric smart environment
19	Dr. Aminullah	Assistant Professor	W	Arabian Journal for Science and Engineering	2.9	High-Definition Image Formation Using Multi-stage Cycle Generative Adversarial Network with Applications in Image Forensic
20	Dr. Saeed Iqbal Khattak	Assistant Professor	X	Biomimetics	4.5	A Novel Heteromorphous Convolutional Neural Network for Automated Assessment of Tumors in Colon and Lung Histopathology Images
21	Dr. Naveed Hussain	Assistant Professor	W	IEEE Access	3.9	PRUS: Product Recommender System Based on User Specifications and Customers Reviews
22	Rabia Arshad	Senior Lecturer	W	Energy Reports	4.937	Wavelet multiscale principal components and traveling waves enabled machine learning technique for protection of MT-HVDC systems
23	Imran Arshad Choudhry	Assistant Professor	X	Biomimetics	4.5	Hybrid Diagnostic Model for Improved COVID-19 Detection in Lung Radiographs Using Deep and Traditional Features

24	Dr. Muhammad Zubair & Dr. Muhammad Umair	Assistant Professor & Assistant Professor/ Dir. Graduate Program	W	Journal of King Saud University - Computer and Information Sciences	6.9	A comprehensive computer-aided system for an early-stage diagnosis and classification of diabetic macular edema
25	Dr. Saeed Iqbal Khattak	Assistant Professor	W	IEEE Access	3.9	Fusion of Textural and Visual Information for Medical Image Modality Retrieval Using Deep Learning-Based Feature Engineering
26	Saira Latif	Lecturer	W	The Journal of Systems and Software	3.5	Pragmatic evidence of cross-language link detection: A systematic literature review
27	Dr. Saeed Iqbal Khattak	Assistant Professor	W	IEEE Journal of Biomedical and Health Informatics	7.7	AD-CAM: Enhancing Interpretability of Convolutional Neural Networks with a Lightweight Framework - From Black Box to Glass Box
28	Dr. Saeed Iqbal Khattak	Assistant Professor	W	Multimedia Tools and Applications	3.6	Privacy-preserving collaborative AI for distributed deep learning with cross-sectional data
29	Dr. Farhan Dawood	Hod Software Engineering/ Assistant Professor	W	Applied Sciences	2.7	Class-Wise Classifier Design Capable of Continual Learning Using Adaptive Resonance Theory-Based Topological Clustering
30	Muhammad Arham Tariq	Lecturer	X	Cybernetics and Information Technologies	1.2	Comparing Different Oversampling Methods in Predicting Multi-Class Educational Datasets Using Machine Learning Techniques
31	Dr. Saeed Iqbal Khattak	Assistant Professor	W	Neural Computing and Applications	6	AMIAC: adaptive medical image analyzes and classification, a robust self-learning framework

3. Faculty of Management Sciences (FOMS)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Waqar Ahmad	Assistant Professor	W	Social Indicators Research	2.935	An Evaluation of Uni and Multidimensional Poverty among Farming and Non Farming Community
2	Dr. Jawad Abbas	HoD/Assistant Professor	W	Energy	8.857	Investment in renewable energy and electricity output: Role of green finance, environmental tax, and geopolitical risk: Empirical evidence from China
3	Dr. Waqar Ahmad	Assistant Professor	W	SAGE OPEN	2.032	Faculty Members' Perception of Learning Organization: A Case of Higher Education Institutions
4	Dr. Jawad Abbas	HoD/Assistant Professor	W	Journal of Cleaner Production	11.072	Role of green intellectual capital and top management commitment in organizational environmental performance and reputation: Moderating role of pro-environmental behavior
5	Dr. Jawad Abbas	Assistant Professor	W	Journal of Cleaner Production	11.072	Role of organizational and environmental factors in firm green innovation and sustainable development: Moderating role of knowledge absorptive capacity
6	Dr. Jawad Abbas	Assistant Professor	W	Journal of Cleaner Production	11.072	I act in an environmentally responsible fashion since my firm is socially responsible: A pathway for transition to a responsible society

7	Dr. Sami Ullah	Assistant Professor	X	Current Psychology	2.387	A mediated moderation model of eco-guilt, personal and social norms and religiosity triggering pro-environmental behavior in tourists.
8	Dr. Raja Irfan Sabir	Associate Professor	W	Heliyon	4	Does organizational justice facet matters in knowledge hiding?
9	Dr. Rubeena Tashfeen	Associate Professor	W	International Journal of Finance and Economics	2.9	Forecasting stock prices using a data mining method: Evidence from emerging market
10	Dr. Rubeena Tashfeen	Associate Professor	W	Sustainability	3.9	How Do Women on Board Reduce a Firm's Risks to Ensure Sustainable Performance during a Crisis?
11	Dr. Jawad Abbas	Assistant Professor	W	Sustainable Energy Technologies and Assessments	8	Nexus of renewable energy output, green technological innovation, and financial development for carbon neutrality of Asian emerging economies
12	Dr. Ramsha Naeem	Assistant Professor/Head of MBA program	Y	Asian Journal of Management Cases	0.2	Redesigning the Performance Appraisal System at Mobilink (A)
13	Dr. Nida Zaheer & Dr. Waseem Hassan	Assistant Professor & Associate Dean	W	Geological Journal	2.128	Role of sustainable supply chain management practices in boosting environmental performance: Empirical evidence from the textile sector of developing economies
14	Dr. Sami Ullah	Assistant Professor	X	Foresight	2	Innovation and economic performance of firms in national science & technology park, Islamabad, Pakistan

15	Dr. Rubeena Tashfeen	Associate Professor	W	Journal of Theoretical and Applied Electronic Commerce Research	5.6	The Interplay of AI Adoption, IoT Edge, and Adaptive Resilience to Explain Digital Innovation: Evidence from German Family-Owned SMEs
16	Dr. Abdul Waheed	HoD/Associate Professor	X	Journal of Asia Business Studies	2.9	Alliance learning process and alliance success: the moderating role of openness
17	Dr. Asad Hassan Butt (Resigned)	HoD/Assistant Professor	W	International Journal of Retail and Distribution Management	4.743	Engaging the customer with augmented reality and employee services to enhance equity and loyalty
18	Dr. Salman Iqbal	Assistant professor	W	Administrative Sciences	3	Improving Quality of Human Resources through HRM Practices and Knowledge Sharing
19	Dr. Sami Ullah	Assistant Professor	X	Journal of China Tourism Research	1.9	Development Under Belt and Road Initiative: Gains for Tourism Industry in Participant Countries
20	Dr. Sami Ullah	Assistant Professor	X	Innovation and Management Review	2.7	Why choose technology parks for business location in Pakistan
21	Dr. Aqeel Ahmad	Associate Professor	W	Journal of Hospitality Marketing and Management	12.5	From screen to service: how corporate social responsibility messages on social media shape hotel consumer advocacy
22	Dr. Muhammad Shehzad Hanif	Assistant Professor	W	Multimedia Systems	2.603	Empowering neural collaborative filtering with contextual features for multimedia recommendation
23	Dr. Muhammad Shehzad Hanif & Dr. Aitzaz Khurshid	Assistant Professor	W	The International Journal of Management Education	5.2	Cyberslacking continuance intentions of the adult online learners from the business schools: An espoused cultural value perspective

24	Dr. Raja Irfan Sabir	Associate Professor	X	Cogent Business and Management	3	Role of green and multisensory packaging in environmental sustainability: Evidence from FMCG sector of Pakistan
25	Dr. Aqeel Ahmad & Dr. Irfan Siddique	Associate Professor and Head of Business Administration programs & Assistant Professor and Head of BBA program	W	Corporate Social Responsibility and Environmental Management	9.8	Beyond self-interest: how altruistic values and human emotions drive brand advocacy in hospitality consumers through corporate social responsibility
26	Dr. Salman Iqbal	Assistant Professor	W	Administrative Sciences	3	A System Dynamics Perspective on Workplace Spirituality and Employee Behavior
27	Dr. Snober Javid	Assistant Professor	W	Resources Policy	10.2	Resource curse or blessings hypothesis in Pakistan: The role of financial development and oil prices in era of globalization

4. Faculty of Pharmaceutical Sciences (FOPS)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Rabia Ali & Sarah Ahmad	Senior Lecturer & Lecturer	Y	Latin American Journal of Pharmacy	0.249	Mechanochemical Synthesis, Characterization and Cytotoxicity Assay of Cadmium Chloride with L-Cysteine
2	Dr. Huma Saeed	Assistant Professor	W	Pharmaceuticals	5.215	In Vitro/In Vivo Evaluation of Clomipramine Orodispersible Tablets for the Treatment of Depression and Obsessive-Compulsive Disorder
3	Dr. Ghulam Jilany Khan	Associate Professor	W	Phytotherapy Research	6.388	Total flavonoid extract from <i>Dracocephalum moldavica</i> L. improves pulmonary fibrosis by reducing inflammation and inhibiting the hedgehog signaling pathway
4	Dr. Mahtab Ahmad Khan	Professor	W	Journal of Clinical Medicine	4.964	Optimal Glomerular Filtration Rate Equations for Various Age Groups, Disease Conditions and Ethnicities in Asia: A Systematic Review
5	Mr. Waqas Akram	Senior Lecturer	W	Journal of Clinical Medicine	4.964	Optimal Glomerular Filtration Rate Equations for Various Age Groups, Disease Conditions and Ethnicities in Asia: A Systematic Review
6	Dr. Muhammad Asad Saeed	Assistant Professor	Y	Pakistan Journal of Pharmaceutical Sciences	0.684	Anti-diarrheal, antipyretic and phytochemical investigation of methanolic extract of <i>Ficus lyrata</i> leaves

7	Dr. Mahtab Ahmad Khan	Dean/Professor	W	Pharmaceuticals	5.215	Fabrication and Characterization of Celecoxib-Loaded Chitosan/Guar Gum-Based Hydrogel Beads
8	Dr. Muhammad Zaman & Dr. Hafiz Shoaib Sarwar	Associate Professor & Assistant Professor	X	International Journal of Polymer Sciences	2.973	Application of Nanoprecipitation Technique to Develop Poloxamer-407 Facilitated Solid Lipid Nanoparticles for the Controlled Delivery of Tacrolimus
9	Dr. Mahtab Ahmad Khan	Dean/Professor	W	Arabian Journal of Chemistry	6.212	Benzoic-D5 acid as D2 receptor agonist in the treatment of rotenone induced Parkinson's disease in mice
10	Dr. Muhammad Zaman	Associate Professor	W	Journal of Liposomes Research	5.586	A comprehensive review on transthesomes as a novel vesicular approach for drug delivery through transdermal route
11	Dr. Mahtab Ahmad Khan	Dean/Professor	W	Pharmaceutics	5.4	Design and Evaluation of Hydrophobic Ion Paired Insulin Loaded Self Micro-Emulsifying Drug Delivery System for Oral Delivery
12	Dr. Mahtab Ahmad Khan	Dean/Professor	W	Drug Discovery Today	7.4	Recent advances towards overcoming the blood-brain barrier
13	Dr. Mahtab Ahmad Khan	Dean/Professor	W	European Journal of Pharmacology	5	Lauric acid provides neuroprotection against oxidative stress in mouse model of hyperglycaemic stroke
14	Dr. Waqas Akram & Dr. Mahtab Ahmad Khan	Senior Lecturer & Dean/Professor	W	Journal of Nephrology	3.4	Comparison of Pakistani CKD-EPI, new Asian-modified CKD-EPI and revised Lund-Malmö study equations in a South Asian CKD population: a study from a Pakistani CKD cohort

15	Dr. Muhammad Zaman & Dr. Huma Hameed	Associate Professor & Assistant Professor	W	ACS Omega	4.1	Formulation, Characterization, and Evaluation of β -Cyclodextrin Functionalized Hypericin Loaded Nanocarriers
16	Dr. Muhammad Zaman	Associate Professor	W	Journal of Liposome Research	4.4	Vesicular approach of cubosomes, its components, preparation techniques, evaluation and their appraisal for targeting cancer cells
17	Dr. Muhammad Zaman & Dr. Huma Hameed	Associate Professor & Assistant Professor	X	Gels	4.6	Lamotrigine-Loaded Poloxamer-Based Thermo-Responsive Sol-Gel: Formulation, In Vitro Assessment, Ex Vivo Permeation, and Toxicology Study
18	Dr. Muhammad Zaman	Associate Professor	W	Journal of Liposome Research	4.4	Solid lipid nanoparticles: a versatile approach for controlled release and targeted drug delivery
19	Dr. Muhammad Zaman	Associate Professor	W	Pharmaceuticals	4.6	Statistically Optimized Polymeric Buccal Films of Eletriptan Hydrobromide and Itopride Hydrochloride: An In Vivo Pharmacokinetic Study
20	Ms. Naila Tabassam & Dr. Huma Hameed	Senior Lecturer & Assistant Professor	X	Gels	4.6	Thermo-Responsive Sol-Gel-Based Nano-Carriers Containing Terbinafine HCl: Formulation, In Vitro and Ex Vivo Characterization, and Antifungal Activity
21	Dr. Huma Hameed	Assistant Professor	W	Nutrients	5.9	Prevalence of Eating Disorders and Their Association with Social Media Addiction among Youths

22	Dr. Muhammad Zaman	Associate Professor	X	International Journal of Polymeric Materials and Polymeric Biomaterials	3.2	Design, optimization & characterization of niosomal & polymeric nanoparticles
23	Dr. Mahtab Ahmad Khan & Dr. Huma Hameed	Dean/Professor & Assistant Professor	W	Biomedicines	4.7	Natural Fatty Acid Guards against Brain Endothelial Cell Death and Microvascular Pathology following Ischemic Insult in the Presence of Acute Hyperglycemia

5. Faculty of Humanities and Social Sciences (FHSS)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Alia Asmat	Assistant Professor	X	Journal of Substance Use	0.895	Exploration of the initiation of substance use among Pakistani adolescents: a qualitative approach
2	Dr. Arslan Tariq Rana	Assistant Professor	W	Natural Hazards	3.185	FDI and CO2 emissions in developing countries: the role of human capital
3	Dr. Khalid Manzoor Butt	Dean	W	Energy	8.857	Dynamic prognostic interaction between social development and energy consumption optimization: Evidence from European union member countries
4	Dr. Alia Asmat	Associate Professor	X	JPMA. The Journal of the Pakistan Medical Association	1.002	Stigmatisation and perceived social support as predictor of treatment of substance use disorder (SUD): A systematic review

5	Dr. Alia Asmat	Associate Professor	X	Journal of Substance Use	0.895	Clinician's perspective about risk and protective factors of substance use: a qualitative exploration
6	Dr. Muhammad Usman Askari	Associate Professor	X	China Quarterly of International Strategic Studies	0.2	China's Policy Toward Afghanistan and Its Impact on India

6. Faculty of Languages & Literature (FLL)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Tahir Saleem	Associate Professor/Associate Head	W	International Journal of Multilingualism	2.26	The evidence of Embedded Language islands: the case of Pashto-English codeswitching
2	Shazia Bukhari	Lecturer	W	Cogent Arts and Humanities	1	Internalizing Dehumanization: An Althusserian Anatomization of Jamil Ahmed's the Wandering Falcon
3	Rabia Batool (Two Authors Case)	Lecturer	W	Cogent Arts & Humanities	1	Comparative construction morphology of diminutive forms in English and Urdu
4	Dr. Tahir Saleem	Associate Head/Associate Professor				
5	Dr. Muhammad Safdar	Assistant Professor	W	Cultural Dynamics	0.6	Love and Marriage: Reimagining Muslim female subjectivity in Kamila Shamsie's Salt and saffron
6	Dr. Tahir Saleem & Dr. Baber Sultan. A. Khan	Associate Professor/Associate Head & Professor/HoD	X	International Journal of Early Years Education	1.9	Exploring the efficacy of children's media use in enhancing L2 vocabulary acquisition

7. Faculty of Engineering (FOE)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Muhammad Saadi	HoD/Associate Professor	W	IEEE Access	3.476	Transfer Learning Approach to IDS on Cloud IoT Devices Using Optimized CNN
2	Dr. Muhammad Rizwan Shad	Dean	X	Thermal Science	1.971	A novel configuration of a dual concentrated photovoltaic system: Thermal, optical, and electrical performance analysis
3	Sadaf Zeeshan	Assistant Professor	W	Sustainability	3.889	The Design and Evaluation of an Orange-Fruit Detection Model in a Dynamic Environment Using a Convolutional Neural Network
4	Ali Ahmad & Arslan Ashraf	Senior Lecturer & Assistant Professor	W	Mathematics	2.592	Coordinated Economic Operation of Hydrothermal Units with HVDC Link Based on Lagrange Multipliers
5	Muhammad Aamir Hayat & Dr. Ali Faisal Murtaza	Associate Lecturer & Research Director, Associate Professor	W	Sustainability	3.889	Design and Analysis of Input Capacitor in DC–DC Boost Converter for Photovoltaic-Based Systems
6	Dr. Muhammad Majid Gulzar	Associate Professor	X	Electrical Engineering	1.8	Load frequency regulation of interconnected multi-source multi-area power system with penetration of electric vehicles aggregator model
7	Arslan Ashraf & Dr. Muhammad Saadi	Assistant Professor & HoD/Associate Professor	X	World Electric Vehicle Journal	2.3	The Impact of Phase-Locked Loop (PLL) Architecture on Sub-Synchronous Control Interactions (SSCI) for Direct-Driven Permanent Magnet Synchronous Generator (PMSG)-Based Type 4 Wind Farms

8	Dr. Muhammad Kashif	HoD, Mechanical Engineering Department	W	Experimental Thermal and Fluid Science	3.2	BPNN model based AI for the estimation of soot data from flame luminosity emissions in H2/N2 diluted ethylene laminar diffusion flames
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8. Faculty of Law (FOL)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Zeeshan Ashraf	Assistant Professor	Y	Journal of Journalism, Media Science & Creative Arts	Non-Impact Factor	Natural Law, Constitutionalism and Media Laws: What's Amiss in Media Regulations?
2	Zeeshan Ashraf	Assistant Professor	Y	Journal of Law and Social Studies	Non-Impact Factor	Independence of Judiciary in Malaysia and Pakistan: The Way Forward
3	Zeeshan Ashraf	Assistant Professor	Y	Manchester Journal of Transnational Islamic Law and Practice	Non-Impact Factor	Legal Analysis of the Customary Practices in the Resolution of Family Disputes in Pakistan.
4	Zeeshan Ashraf	Assistant Professor	Y	Pakistan Journal of Criminology	Non-Impact Factor	Jirga and Panchayat for the Resolution of Family Disputes in Pakistan: An Analytical Prospects
5	Zeeshan Ashraf	Assistant Professor	Non-Recognized Journal	UCP Journal of Law & Legal Education	Non-Impact Factor	The Recommendations of The Council of Islamic Ideology on Family Laws: An Analytical Review
6	Zeeshan Ashraf	Assistant Professor	Y	Pakistan Journal of Criminology	Non-Impact Factor	The Clinical Legal Education (CLE): A Less Travelled Pathway in Pakistan

9. Faculty of Media and Mass Communication (FMMC)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Fawad Baig	HoD/Associate Professor	W	Media, War and Conflict	1.3	Pak-India relations: A comparative analysis of political cartoons

10. Office of Research Innovation & Commercialization (ORIC)

Sr. No.	Faculty Member's Name	Designation	HEC Cat	Journal	Impact Factor	Title
1	Dr. Ali Faisal Murtaza	Director Research /Associate Professor	W	Energies	3.252	A Reconfiguration Circuit to Boost the Output Power of a Partially Shaded PV String
2	Dr. Ali Faisal Murtaza	Director Research /Associate Professor	X	Transactions of the Institute of Measurement and Control	2.146	An improved sliding mode control-based GMPPT algorithm for photovoltaic system
3	Dr. Ali Faisal Murtaza	Director Research/Associate Professor	W	Applied Sciences	2.7	Maximum Power Point Tracking Algorithm of Photo-Voltaic Array through Determination of Boost Converter Conduction Mode
4	Dr. Ali Faisal Murtaza	Associate Professor/Director Research	X	International Journal of Circuit Theory and Applications	2.3	An improved 0.8VOC model-based global maximum power point tracking algorithm for photovoltaic system
5	Dr. Mazhar Iqbal	Director Academics	X	International Journal of Modern Physics B	1.404	Viscous dissipation and Joule heating effects on hydro-thermal power law nanofluid through annular duct

6	Dr. Mazhar Iqbal	Director Academics	X	Modern Physics Letters B	1.9	Forced convective power-law fluid flow through porous annular sector duct
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2.5 Best Researcher & Innovator Award

The practical outcome of faculty members' collective research and innovative work is essential for the university to achieve its mission in the context of becoming a research-intensive institute. In order to acknowledge the research and creative efforts of faculty members, University of Central Punjab (UCP) offers the Best Researcher and Innovator Award (BRIA), both at university and faculty levels, on account of extraordinary performance in his/her area of interest.



UNIVERSITY LEVEL-BEST RESEARCHER & INNOVATOR AWARD



Dr. Muhammad Zaman
Associate Professor
Faculty of Pharmaceutical Sciences

FACULTY LEVEL-BEST RESEARCHER & INNOVATOR AWARD



Dr. Fawad Balg
HoD/Associate Professor,
Faculty of Media and
Mass Communication



Dr. Muhammad Rafiq
Professor
Faculty of Science
& Technology



Dr. Muhammad Saad
HoD/Associate Professor
Faculty of Engineering







Dr. Tahir Saleem
Associate Head/Associate Professor
Faculty of Language
& Literature



Dr. Saeed Iqbal Khattak
Assistant Professor
Faculty of Information Technology
and Computer Science





2.6 Top Cited Researchers

According to most reputed Web of Science (WoS) database, the citations of UCP have enhanced remarkably, which means that local and international research community are referring to the research work of UCP in their publications, thus, acknowledging the quality of research at UCP.

Series No.	Name	Picture	Designation/ Faculty	Citations	H-index
1.	Dr. Muhammad Naveed		HoD/Associate Professor/ Faculty of Science & Technology (FOST)	5212	28
2.	Dr. Muzammil Hussain		Associate Professor/ Faculty of Information Technology and Computer Science (FOIT&CS)	3690	40
3.	Dr. Sumera Zaib		HoD/Associate Professor/ Faculty of Science & Technology (FOST)	3307	32
4.	Dr. Muhammad Akhyar Farrukh		Professor/ Faculty of Science & Technology (FOST)	2627	29

5.	Dr. Ghulam Jilany Khan		Associate Professor/ Faculty of Pharmaceutical Sciences (FOPS)	2436	24
6.	Dr. Khalida Naseem		Assistant Professor/ Faculty of Science & Technology (FOST)	2234	26
7.	Dr. Muhammad Rafiq		Professor/ Faculty of Science & Technology (FOST)	2232	26
8.	Dr. Mahtab Ahmad Khan		Dean/ Professor/ Faculty of Pharmaceutical Sciences (FOPS)	2219	18
9.	Dr. Shahid Saeed Siddiqi		HoD/Professor/ Faculty of Science & Technology (FOST)	2027	28
10.	Dr. Ali Faisal Murtaza		Director Research/ Associate Professor/ ORIC/ Faculty of Engineering (FOE)	1918	20

11.	Dr. Saira Andleeb Gillani		Professor/ Faculty of Information Technology and Computer Science (FOIT&CS)	1687	16
12.	Dr. Ahmad Faisal Imtiaz Siddiqi		Professor/ Faculty of Management Sciences (FOMS)	1537	17
13.	Dr. Muhammad Jamshaid		Professor/ Faculty of Pharmaceutical Sciences (FOPS)	1319	21
14.	Dr. Muhammad Riaz		Assistant Professor/ Faculty of Science & Technology (FOST)	1306	16
15.	Dr. Raja Irfan Sabir		Associate Professor/ Faculty of Management Sciences (FOMS)	1255	17
16.	Dr. Muhammad Zaman		Associate Professor/ Faculty of Pharmaceutical Sciences (FOPS)	1170	18

17.	Dr. Babar Hussain		Assistant Professor/ Faculty of Science & Technology (FOST)	973	14
18.	Dr. Muhammad Saadi		HoD/ Associate Professor/ Department of Engineering (FOE)	900	18
19.	Mr. Farahat Ali		Senior Lecturer/ Faculty of Media and Mass Communication (FMMC)	886	7
20.	Taimoor Hassan		Senior Lecturer/ Faculty of Information Technology and Computer Science (FOIT&CS)	831	13

2.7 Faculty Members Scoring 100 plus Impact Factor (2023)

Impact factor score is one of the key metric parameters through which the research productivity of any researcher can be assessed. **Twelve faculty members** of UCP have achieved 100+ impact factor score.



Dr. Muhammad Rafiq

Professor
Faculty of Science & Technology
(FOST)



***Dr. Muhammad Akhyar
Farrukh***

Professor
Faculty of Science &
Technology (FOST)



Dr. Sumera Zaib

HoD/Associate Professor
Faculty of Science & Technology
(FOST)



Dr. Khalida Naseem

Assistant Professor
Faculty of Science & Technology
(FOST)



Dr. Muhammad Naveed

Associate Professor/ HOD
Faculty of Science and
Technology (FOST)



Dr. Muhammad Zaman

Assistant Professor
Faculty of Pharmacy (FOPS)



Dr. Ghulam Jilany Khan

Associate Professor

Faculty of Pharmaceutical Sciences
(FOPS)



Dr. Huma Hameed

Assistant Professor

Faculty of Pharmaceutical
Sciences (FOPS)



Dr. Mahtab Ahmad Khan

Dean/ Professor

Faculty of Pharmaceutical
Sciences (FOPS)



Dr. Hafiz Shoaib Sarwar

Assistant Professor

Faculty of Pharmaceutical Sciences
(FOPS)



Dr. Ali Faisal Murtaza

Director Research/ Associate
Professor/ ORIC

Faculty of Engineering (FOE)



Dr. Muhammad Saadi

HoD/ Associate Professor

Department of Engineering (FOE)

2.8 Call for Grants (2022 -2023)

ORIC identify and disseminate information regarding call for grants/proposals from a funding agency, institution, organization, or foundation seeking research projects to support. This call typically outlines specific areas of interest, themes, or topics for which the funding body is willing to provide financial support. Researchers, academics, and scientists are invited to submit their proposals for consideration.

 <h3 style="text-align: center;">CALL FOR PROPOSALS GUIDANCE RAPID TECHNOLOGY TRANSFER GRANT</h3> <p>Description: The Higher Education Commission (HEC) of Pakistan invites researchers in Pakistan to respond to this RAPID Research and Technology Grant (RTTG) Call for Proposals. The RTTG programme is supported by the World Bank and implemented by HEC. RTTG programme is anticipated to facilitate the transfer of new academic knowledge and research to accelerate commercialization by supporting promising partnerships between academia and industry.</p> <p>Applicant's Eligibility:</p> <ul style="list-style-type: none"> Principal Investigator must be a regular faculty member (PhD or FAPS/MCPS/FRCS) or universities (Public or private sector) (The VC/Rector shall ensure that max. two exceptional proposals per HEI will be submitted) Co-financing (including in kind or cash contribution) by the industry partner is mandatory. <p>Thematic Areas: Health & Pharma (Bandages & Dressings for Health Care, Medicines and active pharmaceutical ingredients etc.), Agriculture & Food Security (Food Production and Crop Yield, Value added items derived from fruits & crops (Fruit essence etc.)), Textile (Fiber and Polymer Technology, Functional Textiles and Applications etc.), Material Sciences, Household Cosmetics and Body-care Goods, Environment (Fog and Smog Mitigation, Pollution etc.), Information Technology (Cyber Security, Robotics and Automation etc.)</p> <p>Objective: This Call for Proposals is focused on technology transfer in an academic-industry collaboration. The proposed project scope must be achievable in the six-month grant period.</p> <p>Funding: Budgets for RTTG awards will be up to a maximum of Rs. 7.5 million (USD 50,000) with a maximum project duration of 6 months.</p> <p>Deadline: Full Proposals must be submitted to HEC by June 08, 2023 (11:59 PM) Pakistan Time.</p> <p>Web Link: https://www.hec.gov.pk/english/services/Rnd/RTTG/Pages/default.aspx</p>	  <h3 style="text-align: center;">INTERNATIONAL RESEARCH NETWORK FOR THE STUDY OF SCIENCE & BELIEF IN SOCIETY (INSBS) 2023-2024 GRANT PROGRAMMES</h3> <p>The INSBS grant programmes promote the growth of the social study of science and belief globally, by supporting the ongoing development of an international network of active academic researchers. We are excited to launch our 2023-2024 grant programmes.</p> <p>Eligibility: Researchers at any career stage who work on the social study of science and religion in society are welcome to apply for this programme. Researchers may only be the lead applicant on one application but may apply as co-investigator on multiple applications. If you do not have an institutional affiliation, please contact us for further guidance in advance of submitting your application.</p> <p>Academic Disciplines/ Projects: We will consider applications from disciplines including psychology, sociology, history, anthropology, science and technology studies, and related fields.</p> <p>Projects may include:</p> <ul style="list-style-type: none"> New research projects (this can include data collection costs, dissemination costs and, where justified, equipment to carry out and analyse research data). Teaching buyout/summer salary (this should be to enable new research projects, analysis of data already collected, or to develop a defined publication or output). Impact and dissemination activity (this could include funding to enable non-academic beneficiaries to engage with, or feedback on, research previously conducted, or to develop new pedagogical approaches with defined outputs). Research collaboration (this could be to enable researchers in different institutions, especially those working in different countries, to meet and work together on defined publications or outputs). <p>Funding: Seed Fund projects will fund up to £10,000 and Small Research projects will fund up to £20,000 for a maximum duration of 7 months, between December 1st, 2023 to June 30th, 2024.</p> <p>Deadline: September 17th, 2023</p> <p>Link: https://scienceandbeliefinsociety.org/grants/small-research-grants/</p>
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2.9 Research and Development (R&D) Projects



Research and Development (R&D) projects are initiatives undertaken by UCP/ UCP Faculty to explore, discover, and create new knowledge, technologies, products, or processes. These projects are typically focused on advancing understanding,

solving problems, or innovating in a specific field. Details of some ongoing/ approved/ in-process R&D Projects of UCP are as:

Sr. No.	Faculty Memembr's Name/ Designation	Project Title	International/ National Funding Agency	Funding Period	Amount	Status
1.	Dr. Muhammad Akhyar Farrukh Professor of Chemistry	Air pollution monitoring of PM2.5 in Lahore to investigate the cause of smog and its effects on health”	University at Albany, State University of New York, USA	2022-2023	4.21 million	On going
2	Dr. Muhammad Akhyar Farrukh Professor of Chemistry	Application of spectral process manufacturing analysis technology in intelligent manufacturing	PSF & NSFC	2023-2024	7.4 million	On going

3	Dr. Muhammad Akhyar Farrukh Professor of Chemistry	Natural essential oil loaded nanoparticles (nanoemulsion) incorporated in poultry feed as alternative to antibiotics	PSF	2023-2025	6.639 million	On going
4	Dr. Muhammad Akhyar Farrukh Professor of Chemistry	Establishment of Nano-Materials Fabrication Lab under the National Center for Nanoscience and Nanotechnology (NCNN)	HEC&PCM	2023-2026	3325.598 million (11 Partner Universities)	On going
5	Dr. Muhammad Rafiq (Professor/COPI)	Implementation of computationally efficient numerical approach to analyze a Covid-19 pandemic model	Deanship of Scientific Research, King Faisal University, Al Ahsa, KSA	1-11-2022 To 1-05-2023	1.1 million	Completed
6	Dr. Fawad Baig (Associate Professor/HOD)	PAK-UK Education Gateway Mobility Partnership Grant for Students	British Council Pakistan	2023-2024	6,971,022 (Around 7 million)	Approved
7	Dr. Sumera Zaib (Associate Professor/HOD)	Harnessing the Untapped Therapeutic Potential of Phthalazine scaffold as Small-molecule Inhibitors of Ectonucleotidases for the Treatment of Diabetic Complications	PSF	2023-2026	4.65 million	In-process

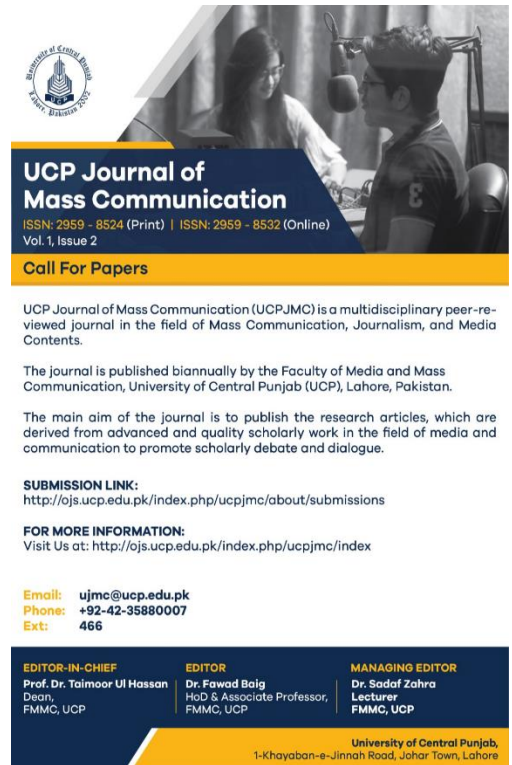
2.10 Research Journals

In accordance with the Higher Education Commission's rules, the University of Central Punjab (UCP) offers basic information on the launching and indexing of research journals. The research journals were being worked on by designated focus individuals from every faculty. In the fields of research and teaching. The launch of its (07) Seven Research Journals is one of the organization's most notable achievements. Below are some details of these Journals.

Sr No.	Journal Name	Volume/Issue	Span	Publication Status Remarks
1	UCP Journal of Law & Legal Education	1 (1)	June 2022-Dec 2023	Published
		1 (2)	Jan 23- June 23	Published
		2 (1)	July 23 - Dec 23	In process
2	UCP Journal of Humanities & Social Sciences	1(1)	June 2022-Dec 2022	Published
		1(2)	Jan 23- June 23	Published
		2(1)	July 23 - Dec 23	Published
3	UCP Journal of Mass Communication	1(1)	Jan 23- June 23	Published
		1(2)	July 23 - Dec 23	Published
4	UCP Journal of Business Perspectives	1(2)	Jan 23- June 23	Published
		1(2)	July 23 - Dec 23	In process
5	UCP Journal of Languages & Literature	1(1)	Jan 23 - June 23	Published
		1(2)	July 23 - Dec 23	In process
6	UCP Journal of Sciences & Technology	1(1)	July 23 - Dec 23	Published
7	UCP Journal of Engineering & Information Technology	1(1)	Jan 23 - June 23	Published
		1(2)	July 23 - Dec 23	In process

2.91 UCP Journal of Mass Communication

UCP Journal of Mass Communication (UCPJMC) is multidisciplinary peer-reviewed journal in the field of Mass Communication, Journalism, and Media Contents. The journal is published bi-annually by the Faculty of Media and Mass Communication, University of Central Punjab (UCP), Lahore, Pakistan. The main aim of the journal is to publish the research articles, which are derived from advanced and quality scholarly work in the in the field of mass communication to promote scholarly debate and dialogue. This Journal encourages research that contributes to the advancement of mass communication as an interdisciplinary field. The journal strictly follows the policy of initial editorial screening and peer-reviewing process at the second step to ensure quality. This journal welcomes submissions from research scholars all across the world.



The cover of the UCP Journal of Mass Communication features a photograph of two students, a woman and a man, working together at a desk with a laptop. The journal's title is prominently displayed in a blue box, along with its ISSN numbers for print and online editions. Below the title, it specifies the volume and issue. A 'Call For Papers' section highlights the journal's multidisciplinary focus and its biannual publication schedule. It also states the journal's aim to publish research articles that promote scholarly debate. Submission and contact information is provided, including a submission link, email, phone, and ext. numbers. The editorial board is listed, featuring the Editor-in-Chief, Editor, and Managing Editor, all from the Faculty of Media and Mass Communication (FMMC) at UCP. The journal is published by the University of Central Punjab, located at 1-Khayaban-e-Jinnah Road, Johar Town, Lahore.

UCP Journal of Mass Communication
ISSN: 2959 - 8524 (Print) | ISSN: 2959 - 8532 (Online)
Vol. 1, Issue 2

Call For Papers

UCP Journal of Mass Communication (UCPJMC) is a multidisciplinary peer-reviewed journal in the field of Mass Communication, Journalism, and Media Contents.

The journal is published biannually by the Faculty of Media and Mass Communication, University of Central Punjab (UCP), Lahore, Pakistan.

The main aim of the journal is to publish the research articles, which are derived from advanced and quality scholarly work in the field of media and communication to promote scholarly debate and dialogue.

SUBMISSION LINK:
<http://ojs.ucp.edu.pk/index.php/ucpjmc/about/submissions>

FOR MORE INFORMATION:
Visit Us at: <http://ojs.ucp.edu.pk/index.php/ucpjmc/index>

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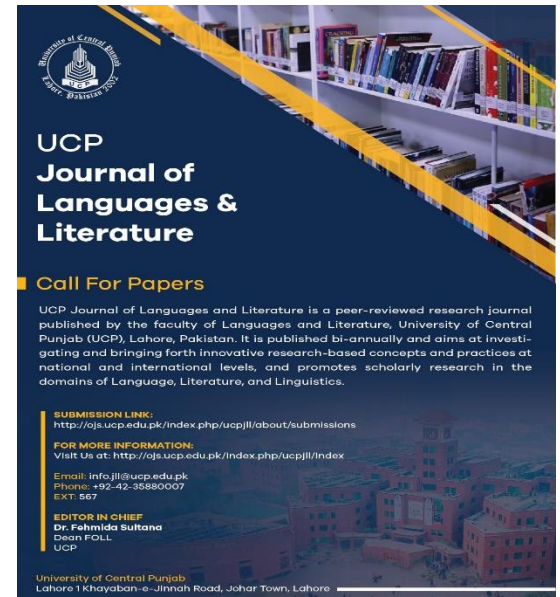
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FMMC, UCP

University of Central Punjab,
1-Khayaban-e-Jinnah Road, Johar Town, Lahore

2.92 UCP Journal of Languages & Literature

UCP Journal of Languages and Literature is a peer-reviewed research journal published by the Faculty of Languages and Literature, University of Central Punjab (UCP), Lahore, Pakistan. It is published bi-annually and aims at investigating and bringing forth innovative research-based concepts and practices at national and international levels, and promotes scholarly research in the domains of Language, Literature, and Linguistics.



The cover of the UCP Journal of Languages & Literature features a photograph of a library with bookshelves filled with books. The journal's title is prominently displayed in a blue box, along with its ISSN numbers for print and online editions. Below the title, it specifies the volume and issue. A 'Call For Papers' section highlights the journal's peer-reviewed nature and its biannual publication schedule. It also states the journal's aim to publish research articles that promote scholarly research. Submission and contact information is provided, including a submission link, email, phone, and ext. numbers. The editorial board is listed, featuring the Editor-in-Chief, Editor, and Managing Editor, all from the Faculty of Languages and Literature (FOLL) at UCP. The journal is published by the University of Central Punjab, located at 1-Khayaban-e-Jinnah Road, Johar Town, Lahore.

UCP Journal of Languages & Literature
ISSN: 2959 - 8524 (Print) | ISSN: 2959 - 8532 (Online)
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Call For Papers

UCP Journal of Languages and Literature is a peer-reviewed research journal published by the faculty of Languages and Literature, University of Central Punjab (UCP), Lahore, Pakistan. It is published bi-annually and aims at investigating and bringing forth innovative research-based concepts and practices at national and international levels, and promotes scholarly research in the domains of Language, Literature, and Linguistics.

SUBMISSION LINK:
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EDITOR-IN-CHIEF
Dr. Fahmida Sultana
Dean FOLL
UCP

University of Central Punjab,
Lahore 1 Khayaban-e-Jinnah Road, Johar Town, Lahore

2.93 UCP Journal of Engineering & Information Technology

UCP Journal of Engineering and Information Technology (UCP-JEIT) is a multidisciplinary, peer-reviewed, open-access journal jointly published by the Faculty of Engineering and the Faculty of Information Technology & Computer Sciences. The journal is devoted to publishing research in the fields of Engineering, Information Technology, and Computer Sciences.



UCP Journal of Engineering and Information Technology

Call for Papers

Vol. 1, Issue 2 (February 2024)


UCP Journal of Engineering and Information Technology (UCP-JEIT) is a multidisciplinary, peer-reviewed, open-access bi-annual journal, jointly published by the Faculty of Engineering and Faculty of Information Technology. The aim of the journal is to provide a platform that covers a wide range of topics covering the multidisciplinary emerging engineering and information technology domain. Topics covered will include but are not limited to:

- Big Data Analytics
- Artificial Intelligence
- Machine Learning
- Natural Language Processing
- Digital Image Processing
- Internet of Things
- Cloud Computing
- Computer Vision
- Power Engineering
- Electronics Engineering
- Telecommunication Engineering
- Computer Engineering
- Mechanical Engineering
- Civil Engineering

Submit your papers at:
<http://ojs.ucp.edu.pk/index.php/ucpjcit/about/submissions>
Email: info.jeit@ucp.edu.pk
Phone: +92-42-35880007 Ext: 301

For more information, please visit:
Website: <http://ojs.ucp.edu.pk/index.php/ucpjcit/>

Muhammad Amjad Iqbal, Ph.D. (University of Central Punjab, Pakistan) – Editor in Chief
Muhammad Saad, Ph.D. (University of Central Punjab, Pakistan) – Managing Editor



2.94 UCP Journal of Science & Technology

UCP Journal of Science & Technology (UCP-JST) is a peer-review biannual journal that encourages interdisciplinary research in Science and Technology including biological, physical, and life sciences by providing a platform for academia and industry to share innovative ideas and findings to deal with real-world challenges. In the current issue, we have published in the areas of Zoology, Physics, Microbiology, Food Sciences and Biotechnology.



UCP Journal of Science & Technology

CALL FOR PAPERS

Vol. 1, Issue 2
February 2024

Open-Access Model
Peer-Review System
Zero Publication Charges
Bi-Annual Issue Frequency
ISSN: 3005-5571 (Online)
3005-5563 (Print)

ABOUT THE JOURNAL

UCP Journal of Science and Technology (UCP-JST) is a multidisciplinary, peer-reviewed, open-access journal devoted to publishing research in the field of Science and Technology, including Biochemistry, Biotechnology, Microbiology, Health, and Pharmaceutical Sciences, Zoology, Mathematics, and Physics.

Dr. Hafiza Rizwana Kausar
Editor-in-Chief

Submission Link:
<http://ojs.ucp.edu.pk/index.php/ucpjst/about/submissions>

Email:
info.jst@ucp.edu.pk

For more information visit:
<http://ojs.ucp.edu.pk/index.php/ucpjst/about>

University of Central Punjab
1, Khayaban-e-Jinnah Road, Johar Town, Lahore

2.95 UCP Journal of Humanities & Social Sciences

UCP Journal of Humanities & Social Sciences is HEC recognized (Y-Category) research journal published by the Faculty of Humanities & Social Sciences, University of Central Punjab (UCP). It is multidisciplinary research journal covers Political Science, International Relations, Economics, Psychology, Sociology, Anthropology, Governance and Public Policy and Philosophy. The Journal serves as a nexus between academia, researchers, and policymakers, with a focus on promoting scholarly work with practical application to societal challenges.



2.96 UCP Journal of Law & Legal Education



UCP Journal of Law and Legal Education (UCP-JLLE) is a peer-reviewed, bi-annual, and open-access journal, published by the Faculty of Law (FOL), University of Central Punjab (UCP). The journal aims to publish research articles in the domains of legal academics, research comparisons of various laws and their application with that of Pakistan laws. The editorial and advisory boards of the journal are comprised of notable law academics, scholars, judges and members of Bar Councils from

Pakistan and around the World.

2.97 UCP Journal of Business Perspectives



The banner features the UCP logo in the top left corner, which includes the text 'University of Central Punjab' and 'FACULTY OF MANAGEMENT SCIENCES'. The main title 'UCP JOURNAL OF BUSINESS PERSPECTIVES' is prominently displayed in bold, dark blue letters. Below the title is a photograph of business professionals in a meeting, with one person's hands on a laptop keyboard and another holding a pen over documents. A dark blue banner with the text 'CALL FOR PAPERS' is overlaid on the image. Below the image, a red banner contains the following text: 'UCP Journal of Business Perspectives (UCP-JBP) is a multidisciplinary, peer-review, open-access journal published by the Faculty of Management Sciences, University of Central Punjab, Pakistan.' At the bottom, a white banner provides submission and contact information: 'SUBMISSION LINK: <http://ojs.ucp.edu.pk/index.php/jbp/about/submissions>', 'FOR MORE INFORMATION: Visit us at: <http://ojs.ucp.edu.pk/index.php/jbp/index>', 'Email: info.jbp@ucp.edu.pk', 'Phone: +92-42-35880007 Ext: 581', and the university's name and address: 'University of Central Punjab, 1-Khayaban-e-Jinnah Road, Johar Town, Lahore.'

UCP JOURNAL OF BUSINESS PERSPECTIVES

CALL FOR PAPERS

UCP Journal of Business Perspectives (UCP-JBP) is a multidisciplinary, peer-review, open-access journal published by the Faculty of Management Sciences, University of Central Punjab, Pakistan.

SUBMISSION LINK:
<http://ojs.ucp.edu.pk/index.php/jbp/about/submissions>

FOR MORE INFORMATION:
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Phone: +92-42-35880007 Ext: 581

University of Central Punjab
1-Khayaban-e-Jinnah Road, Johar Town, Lahore.

In a rapidly changing globalized world, marked by evolving competing and collaborative economic frontiers, and intricate organizational models, a holistic understanding of key driving forces is critical to shaping theories and practice for the future. Through its research articles, the inaugural edition of the UCP Journal of Business Perspectives (UCP-JBP) seeks to provide readers with a panoramic view of various domains, shedding light on local and global landscapes. Each article's substantive conceptual, theoretical, methodological, or applied perspective advances our understanding of management knowledge,

covering many organizational factors. To sum up, the first issue of UCP-JBP makes a robust attempt to open new avenues for academic scholars and policy-makers through multifaceted ideas covering economics, workplace behaviors, education, and banking. The readers are encouraged to build on themes in contemporary management knowledge to create and share inclusive research ideas for the future.

2.11 UCP Conferences

University of Central Punjab serve as a dynamic platform for conducting National/ International Conferences. They serve as dynamic platforms where individuals with shared interests, expertise, and passions converge to exchange ideas, foster collaborations, and explore the forefront of knowledge within their respective fields. These gatherings at UCP provide invaluable opportunities for networking, enabling professionals, researchers, and enthusiasts to connect, share insights, and engage in meaningful discussions. Attendees benefit not only from expert presentations but also from the vibrant exchange of perspectives that often leads to new partnerships and the cultivation of a collective wisdom. UCP Conferences play a pivotal role in driving progress, sparking inspiration, and creating lasting connections that transcend geographic boundaries.

2.12 Conference Calendar

UCP Conference Calendar for the year 2023 & 2024 is as:

	Events	Events	Events	Events	Events	Events	Events	Events	Events	Events	Events	Events	Journals
	0	1	3	2	3	4	1	1	1	2	2	2	Int. Flag. Conf.
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Nat. Conf/Sym
	*Jour. FOMS Missed	Jour. FOST/ FOPS	Jour. FOE/ FOIT&CS 1. Int. Conf. Conf./Sym 15 th -17 th FOHSS # Str. Plan. Int. Conf. 20 th -21 st FOE	Jour. FOLL *Jour. FOMS	Jour. FOMMC 2. Conf./Sym 3 rd May FOMMC ## Str. Plan. Int. Conf. 10 th -11 th FOL	Jour. FOL Jour. FOHSS 1. Int. Flag. Conf. 5 th -6 th FOMS/ FOL 3. Conf./Sym 1 st -2 nd FOLL	Jour. FOMS	Jour. FOST/ FOPS	Jour. FOE/ FOIT&CS	Jour. FOLL 2. Int. Flag. Conf. DUE FOE/ FOIT&CS	Jour. FOMMC 4. Conf./Sym 1 st -2 nd FOPS	Jour. FOL Jour. FOHSS 5. Conf./Sym FOST DONE in 2022	# Str. Plan Adjustment
	X	X		X			X	X	X				
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Journals
	Jour. FOMS	Jour. FOST/ FOPS	Jour. FOE/ FOIT&CS	Jour. FOLL	Jour. FOMMC	Jour. FOL Jour. FOHSS	Jour. FOMS	Jour. FOST/ FOPS	Jour. FOE/ FOIT&CS	Jour. FOLL	Jour. FOMMC	Jour. FOL Jour. FOHSS	Int. Flag. Conf.
	Slot Avail	Slot Avail	3. Int. Flag. Conf. DUE FOHSS/ FOMMC/ FOLL	6. Conf./Sym FOL ##DONE in 2023	7. Conf./Sym DUE FOMS	Slot Avail	Slot Avail	Slot Avail	8. Conf./Sym FOE #DONE in 2023	4. Int. Flag. Conf. DUE FOST/ FOPS	9. Conf./Sym DUE FOIT	Slot Avail	Nat. Conf/Sym
													# Str. Plan Adjustment

2.13 UCP Conference for year 2022 & 2023

Faculty	Date	Conference Name	Type
FOST	26 th - 27 th Dec, 2022	1st National Conference on Emerging Horizons in Science & Technology-NCEHST-2022	National Conference
FHSS	15 th -16 th Mar, 2023	International Conference on Climate Change: Challenges and Responses	International Conference
FOE	20 th -21 st Mar, 2023	1st International Conference on New Trends in Civil Engineering.	International Conference
FOL	17 th -18 th May, 2023	2nd UCP International Conference on Law Tech and Legal Education in Pakistan	International Conference
FLL	1 st -2 nd June, 2023	1st National Conference on Linguistics & Literature	National Conference
FOMS	5 th - 6 th June, 2023	8th International Conference on Contemporary Issues in Business Management	International Conference
FMMC	13 th Jun, 23	Media Symposium on "Trends in Media Education, Profession and Business Models in Digital Era"	Symposium
FOE/ FOIT	17 th -18 th Nov, 2023	(INMIC 2023) 25th International Multi Topic Conference	International Conference
FOPS	23 rd Nov, 2023	2nd National Pharmacy Scientific Conference and Poster Exhibition 2023	National Conference

Chapter No. 3

Overview of Innovation at UCP



Office of Research Innovation & Commercialization (ORIC) is a dynamic and integral aspect that propels the institution toward continuous growth and relevance. ORIC commitment to fostering a culture of creativity and exploration is evident in its

emphasis on cutting-edge research, novel methodologies, and forward-thinking initiatives. The organization serves as a hub for inventive minds, encouraging interdisciplinary collaboration and the cross-pollination of ideas. ORIC innovation strategy extends beyond traditional boundaries, leveraging emerging technologies, embracing diverse perspectives, and adapting to evolving industry landscapes. Through strategic partnerships, incubation programs, and a commitment to staying at the forefront of emerging trends, ORIC ensures that innovation becomes a driving force, not only in its research endeavors but also in its overall mission to catalyze positive change and contribute to advancements in various domains.

The ORIC makes it easier for employees, instructors, and students to patent their creations, and the institution promotes creativity in research.

Under approved intellectual property policies, UCP assists its researchers in commercializing their discoveries. Additionally, it is in charge of offering companies through the Business Incubation Centre to university students. Business executives and entrepreneurs can serve as mentors and provide their knowledge in developing entrepreneurship curricula and subjects that are focused on the requirements of the specific industry.

3.1 Intellectual Property Rights (IPs)

Intellectual Property Rights (IPRs) encompass legal protections for the creations of the mind, including inventions, literary and artistic works, designs, symbols and names. Patents often aim to strike a balance between encouraging innovation and creativity while safeguarding the rights of creators and inventors.



Objective & Goals:

❖ **Encourage Innovation and Creativity.**

Foster an environment where individuals and organizations are motivated to invest time, effort, and resources in developing new ideas, inventions, and creative works.

❖ **Economic Incentives**

Stimulate economic growth by incentivizing innovation and creativity, as individuals and businesses are more likely to invest in research and development when they know their intellectual property is protected.

❖ **Promote Fair Competition:**

Establish a framework that encourages fair competition by preventing unauthorized use or copying of intellectual property, ensuring that businesses can compete based on the merits of their own innovations.

❖ **Technology Transfer:**

Facilitate the transfer of technology and knowledge by providing a legal framework for licensing and sharing intellectual property, fostering collaboration and advancements in various industries.

❖ **International Cooperation:**

Facilitate cooperation among nations to establish and enforce intellectual property standards globally, ensuring consistency and protection for creators and inventors across borders.

Patents play a crucial role in promoting innovation by providing inventors with an incentive to invest time and resources in research and development. However, the patent system is subject to

legal and ethical considerations, and it can sometimes be a source of controversy, particularly when it comes to issues like patent trolls and the balance between promoting innovation and protecting the public interest.

3.2 IPs Filed Detailed List (Jan – Dec, 2023)

UCP - ORIC successfully filed 64 patents, 4 patents are granted and 14 patents are under examination process. Details of which are as under:

IPRs (Intellectual Property Rights) Filed from Jan to Dec, 2023

<i>Sr. No.</i>	<i>IP's Title</i>	<i>Faculty Member's Name</i>	<i>Faculty</i>	<i>IPR Type</i>
1.	Preparation Of New Nanoliposomal Vitamin C By micro-emulsification method for anticancer activities	Dr. Muhammad Akhyar Farrukh	FOST	Patent
2.	A computationally engineered mRNA-based vaccine construct against the monkeypox virus	Dr. Muhammad Naveed	FOST	Patent
3.	Herbal shampoo formulation containing moringa oleifera	Dr. Sadia Zulfiqar	FOST	Patent
4.	Polyherbal Organic Shampoo Formulation	Dr. Sadia Zulfiqar	FOST	Patent

5.	Exploration of specific inhibitor of yellow fever specific by targeting helicase and NS5	Dr. Sumera Zaib	FOST	Patent
6.	Development of novel combination therapy for estrogen receptor-negative breast cancer	Dr. Sumera Zaib	FOST	Patent
7.	Synthesis and Characterization of Hybrid Chitosan-Silver Nanoparticles Containing Aqueous Fenugreek Seed Extract	Dr. Sumera Zaib	FOST	Patent
8.	Soy lecithin and hydrogel encapsulated nanoliposomal antibiotic drug formulation by using Moringa oleifera leaves extract and magnesium oxide nanoparticles	Dr. Muhammad Akhyar Farrukh	FOST	Patent
9.	Hydrogel encapsulated nano-antibiotic and anti-cancer drug formulation with vitamin C and cobalt nanoparticles	Dr. Muhammad Akhyar Farrukh	FOST	Patent
10.	Development of Genomic-assisted breeding scheme for improvement of quality phenotypes in fragrant Rice cultivars	Dr. Javed Iqbal	FOST	Patent
11.	" A screening method for the detection of diseased genetic variants causing congenital heart disease "	Hira Mubeen	FOST	Patent

12.	Evaluation of Anticancer Potential of Hybrid Chitosan-Silver Nanoparticles	Dr. Sumera Zaib	FOST	Patent
13.	Finding fibroblast growth factor receptor 3 lead inhibitor to treat achondroplasia	Dr. Sumera Zaib	FOST	Patent
14.	A screening approach for elucidation of rare homozygous variants actionable in cardiac anomalies	Hira Mubeen	FOST	Patent
15.	De novo damaging variants in exomes of congenital heart disease patients	Hira Mubeen	FOST	Patent
16.	Prioritizing single nucleotide variants through whole exome sequencing	Hira Mubeen	FOST	Patent
17.	Detection of rare homozygous damaging variants	Hira Mubeen	FOST	Patent
18.	Copy number variations useful for risk assessment of cardiac anomalies	Hira Mubeen	FOST	Patent
19.	A Multi-epitope Malignant Mesothelioma Vaccine (MMV) Candidate	Dr. Muhammad Naveed	FOST	Patent
20.	Anti-diabetic herbal formulation of snapdragon (antirrhinum majus)	Ammara Masood	FOST	Patent
21.	Development of process for synthesis of silver nanoparticles from tremella fuciformis & their antibacterial potential against citrus canker disease	Dr. Javed Iqbal	FOST	Patent
22.	Development of stev-barley biscuits	Dr. Kanza Aziz Awan	FOST	Patent

23.	Formulation of lecithin encapsulated amygdalin polymeric zinc nanoparticles for enhanced drug release and treatment of cancer	Dr. Muhammad Akhyar Farrukh	FOST	Patent
24.	Computational Design of Monoclonal Antibody Conjugate for Treating Oral Squamous Cell Carcinoma	Dr. Muhammad Naveed	FOST	Patent
25.	Bio fabrication of Bimetallic Nanoparticles using Villares Solanaceae Leaf Extract for Enhanced Bioactivity	Dr. Muhammad Naveed	FOST	Patent
26.	Edible Glitters - The Sparkling Dust	Dr. Kanza Aziz Awan	FOST	Patent
27.	Gluten free chicken nuggets	Dr. Kanza Aziz Awan	FOST	Patent
28.	CNC (Computerized Numerical Control) Engraving and Milling Machine	Dr. Arslan Arif	FOE	Patent
29.	PSL Sign Language Interpreter	Mr. Jawad Khalid Qureshi	FOE	Patent
30.	Design and Fabrication of a Steam Cleaner	Marium Shahid	FOE	Patent
31.	Electric scooter	Dr. Ali Faisal Murtaza	FOE	Patent
32.	Fly Ash Bricks Mix Design by Using Locally Available Material	Prof. Dr. Kafeel Ahmed	FOE	Patent
33.	Induction heater	Mr. Nabeel Khalid	FOE	Patent

34.	Internet of Things (IoT) Development Trainer	Jalil Asghar Mirza	FOE	Patent
35.	Modified cascaded designed controller based on fractional calculus operator β	Daud Sibtain	FOE	Patent
36.	A System to Measure Pressure at the Body Interface on a Curved Surface	Dr. Zohaib Aftab	FOE	Design
37.	A Customizable 5-DOF Hip Exoskeleton	Dr. Zohaib Aftab	FOE	Design
38.	Jominy End Quench Apparatus	Mr. Qasim Shafqat Goraya	FOE	Design
39.	Bypass Detection and Isolation Circuit for PV Module	Dr. Ali Faisal Murtaza	FOE	Design
40.	Three Types Fluorescent Cancer Cell Tagging Regimen, And Its Utility in A Single Sample for Metastatic Dissemination and Drug Targeting	Dr. Ghulam Jilany Khan	FOPS	Patent
41.	Novel Clove oil based Self-Emulsifying Drug Delivery System of Ticagrelor	Dr. Muhammad Zaman	FOPS	Patent
42.	Pharmaceutical Tri - Layer Tablet Formulation and Development with a Novel Composition	Dr. Muhammad Zaman	FOPS	Patent
43.	Pharmaceutical Capsule Formulation and Development with a Novel Composition	Dr. Muhammad Zaman	FOPS	Patent
44.	Pharmaceutical Bilayer Tablet formulation and development with a novel composition	Dr. Muhammad Zaman	FOPS	Patent

45.	A pharmaceutical formulation of bilayer tablet comprising of inner layer and outer layer	Dr. Muhammad Zaman	FOPS	Patent
46.	Development of Pharmaceutical formulation comprising sequential release bilayer tablets of pitavastatin and ezetimibe	Dr. Muhammad Zaman	FOPS	Patent
47.	Scratch Using AR	Fariha Fatima Arif	FOIT&CS	Patent
48.	AR for kids education and moral ethics	Arifeen Ahmad	FOIT&CS	Patent
49.	Maize Auto Seeder	Dr. Syed Atif Mehdi	FOIT&CS	Design
50.	Fungus and Other Disease Detection Using Drone with Camera	Dr. Syed Atif Mehdi	FOIT&CS	Design
51.	Yield Estimation of Citrus Fruit	Dr. Syed Atif Mehdi	FOIT&CS	Design
52.	Cloud Seeding Kit for Drones	Dr. Syed Atif Mehdi	FOIT&CS	Design
53.	IOT Based Industrial Transport Services	Syed Irteza Muzaffar Shah	FOIT&CS	Design
54.	A method for the composition of synthetic functional food products for the treatment of type I diabetes	Dr. Shahid Raza	Director ORIC	Patent
56.	Novel Clove Oil Based Gummies for Oral Trush	Dr. Muhammad Zaman	FOPS	Patent

57.	Novel Composition of Chocolate Based Molded Tablets of Qust-e-Shirin	Dr. Muhammad Zaman	FOPS	Patent
58.	Novel Cardamom-Fennel Based Gummies for Muscle Spasm and Flatulence	Dr. Muhammad Zaman	FOPS	Patent
59.	Novel Composition of Chocolate Based Molded Tablets of Qust-e-Shireen and Stinging nettle	Dr. Muhammad Zaman	FOPS	Patent
60.	Edispoons: Edible spoons revolutionizing sustainable utensils	Dr. Kanza Aziz Awan	FOST	Patent
61.	IoT based Wireless Energy Analysis System with Data Storage Backup	Dr. Muhammad Majid Gulzar	FOE	Patent
62.	Urdu Speech App and sensor for Aphasic Patients	Dr. Mahwish Farooq	FLL	Copyright
63.	Novel composition based Pharmaceutical Bilayer tablet of Sitagliptin and Valsartan	Dr. Muhammad Zaman	FOPS	Patent
64.	Novel composition of Thermoresponsive intra-articular Injection containing Methotrexate, Folic Acid and Dexamethasone Sodium Phosphate	Dr. Muhammad Zaman	FOPS	Patent

3.3 IPs Granted

IPRs (Intellectual Property Rights) Granted

Sr. No.	Title	Faculty Member's Name	Faculty	IPs Type
1.	Family Court Training Software	Dr. Hadia Awan	FOL	Copyright
2.	Holistic Campus Security	Dr. Saeed Iqbal Khattak	FOIT&CS	Copyright
3.	Adaptive Hyper Learning	Muhammad Mustafa Hassan	FOMS	Copyright
4.	A Self Stabilizing Orthotic Knee Joint	Dr. Zohaib Aftab	FOE	Patent

3.4 IPs in Process

Patents Examination Report received from IP Office, Lahore

Sr. #.	Title	Faculty Member's Name	Faculty	Receiving date from IPO
1	IoT based Wireless Energy Analysis System with Data Storage Backup	Dr. Muhammad Majid Gulzar	FOE	17 July, 2023
2	Design and Fabrication of a Steam Cleaner	Ms. Marium Shahid	FOE	28 Nov, 2023
3	Three Types Fluorescent Cancer Cell Tagging Regimen, And Its Utility In A Single Sample For Metastatic Dissemination And Drug Targeting	Dr. Ghulam Jilany Khan	FOPS	21 Nov, 2023
4	Electric Scooter	Dr. Ali Faisal Murtaza	FOE	20 Nov, 2023
5	A computationally engineered mRNA-based vaccine construct against the monkeypox virus	Dr. Muhammad Naveed	FOST	28 Nov, 2023
6	Fly Ash Bricks Mix Design by Using Locally Available Material	Prof. Dr. Kafeel Ahmed	FOE	28 Nov, 2023
7	Induction Heater	Mr. Nabeel Khalid	FOE	28 Nov, 2023
8	Novel Clove oil based Self-Emulsifying Drug Delivery System of Ticagrelor	Dr. Muhammad Zaman	FOPS	28 Nov, 2023

9	Pharmaceutical Tri - Layer Tablet Formulation and Development with a Novel Composition	Dr. Muhammad Zaman	FOPS	28 Nov, 2023
10	Pharmaceutical Capsule Formulation and Development with a Novel Composition	Dr. Muhammad Zaman	FOPS	21 Nov, 2023
11	A Screening Method for the Detection of Diseased Genetic Variants Causing Congenital Heart Disease	Hira Mubeen	FOST	28 Nov, 2023
12	A Screening Approach for Elucidation of Rare Homozygous Variants Actionalble in Cardiac Anomalies	Hira Mubeen	FOST	28 Nov, 2023
13	Anti-Diabetic Herbal Formulation of Snapdragon (Antirrhinum Majus)	Ms. Ammara Masood	FOST	29 Nov, 2023
14	Exploration of specific inhibitor of yellow fever specific by targeting helicase	Dr. Sumera Zaib	FOST	5 Dec, 2023

3.5 UCP Patent Wall



Chapter No. 4

Overview of Commercialization at UCP



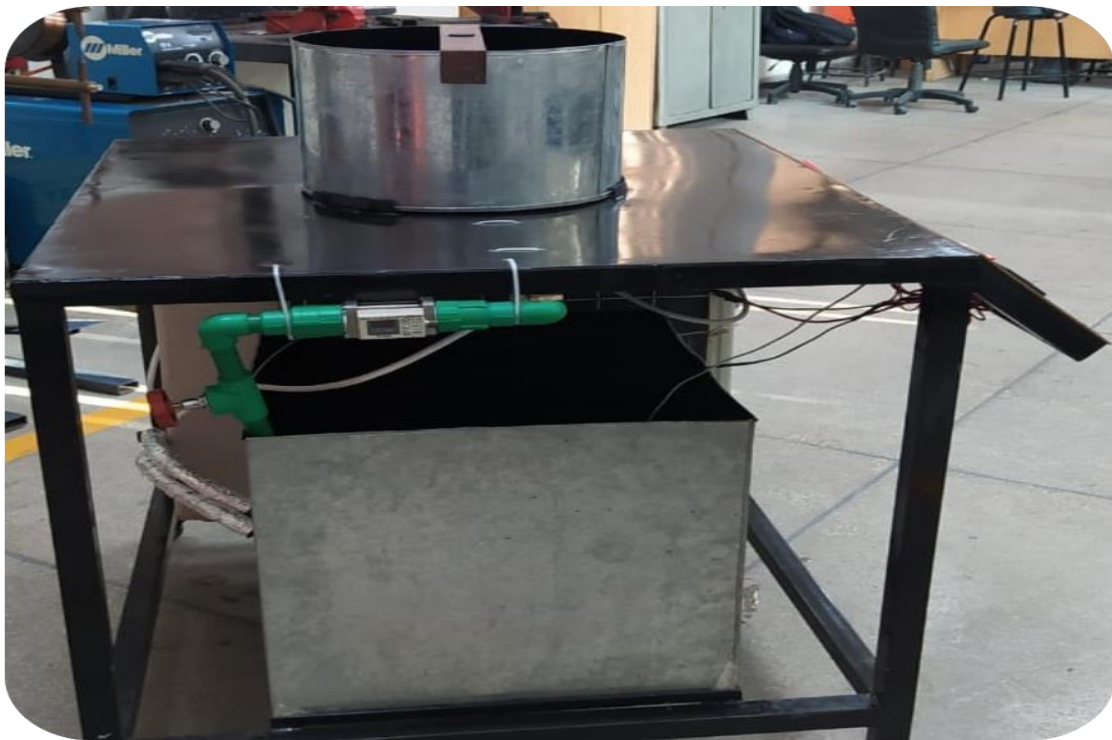
ORIC, in principle, makes it easier to manage intellectual assets, which are mostly generated by faculty research, and transforms them into incredible technologies that benefit society. Links between academics and business are crucial for innovation and the creation of experiential learning models. In this regard, ORIC helps to create partnerships between industry and academia (faculty). In particular, ORIC could be in charge of the following positions and duties:

- ❖ Identifying and assessing relevant concepts
- ❖ Working with possible industrial partners
- ❖ Research and technology development
- ❖ Commercialization of technology

4.1 Technology Transfer Cases

Technology transfer plays a crucial role in converting research and development (R&D) efforts into tangible products, services, or processes that can benefit society, drive economic growth, and foster innovation. 2 Technology Transfer Cases are listed below.

Sr. No.	Title	Industry	Faculty Member's Name	Date
1	Design of Jominy End Quenching Apparatus for measuring the Hardenability of Steel.	Infinity Engineering	Engr. Qasim Shafqat Goraya Sr. Lecturer, ME-UCP	26-06-2023
2	Design of Jominy End Quenching Apparatus for measuring the Hardenability of Steel.	Millat Equipment	Engr. Qasim Shafqat Goraya Sr. Lecturer, ME-UCP	26-06-2023



4.2 Consultancies

The Office seeks to support staff and students in their efforts to develop innovations, seek, secure and manage external funding for research and consultancy in the most accurate and efficient manner. We have varied sorts of research projects running in the University including publicly funded projects, third-party



contract research projects, and consultancy projects. Our work makes a difference in the lives of people by addressing real-world issues through a vast network of partnerships and collaborations. Our research's breadth and interdisciplinary and multidisciplinary nature inspire creative and innovative ideas and solutions.

The University of Central Punjab (UCP) is committed to facilitate its Faculty/ Researchers to partner with industry, government and other organizations to enable them utilizing their specialized skills for the benefit of our society. This may be achieved through UCP Faculty/ Researchers/ staff by engaging in consultancies.

Consultancies offer a wide range of services, including strategic planning, process improvement, organizational restructuring, technology implementation, financial advisory, and more. The specific services provided depend on the consultancy's focus and the expertise of its team.

The objective of the consultancy is to foster participation of UCP Faculty in consultancies that bring opportunities and benefits to the University faculty/ staff/ students/ community and industry. All sectors including public, private, non- profit organizations can be provided consultancies.

4.21 Objectives

- ❖ Knowledge Transfer and Application.
- ❖ Revenue Generation.
- ❖ Enhancing Reputation.
- ❖ Networking and Collaboration.
- ❖ Applied Research and Innovation.
- ❖ Professional Development.

4.22 Scope

- ❖ Industry-Specific Consulting.
- ❖ Policy and Strategy Consulting.
- ❖ Technology Transfer.
- ❖ Training and Workshops.
- ❖ Community Engagement.

4.23 Types of Consultancies

Universities establish consultancies to leverage their expertise, research capabilities, and faculty knowledge to address real-world challenges. These consultancies can vary widely in focus and scope, reflecting the diverse strengths of the academic institution. Here are several types of consultancies commonly associated with universities:

- ❖ Research and Development Consultancies.
- ❖ Technology Transfer and Commercialization Offices.
- ❖ Policy and Governance Consultancies.
- ❖ Environmental and Sustainability Consultancies.
- ❖ Business and Management Consultancies.
- ❖ Healthcare and Medical Consultancies.
- ❖ Education Consultancies.
- ❖ Social Impact and Community Development Consultancies.
- ❖ Data Analytics and Information Technology Consultancies.
- ❖ International Development and Global Outreach Consultancies.

4.24 Purpose of Consultancy Service

Consultancy services serve various purposes across different sectors and industries. The primary goal of seeking consultancy is to access specialized knowledge, expertise, and advice to address specific challenges or to enhance overall performance. Here are some common purposes of consultancy services:

- ❖ Problem Solving.
- ❖ Strategic Planning.
- ❖ Technical Expertise.
- ❖ Market Research and Analysis.
- ❖ Training and Development.
- ❖ Financial Advisory.
- ❖ Legal and Compliance.
- ❖ Innovation and Research.
- ❖ Efficiency and Process Improvement.

4.25 UCP Consultancy Services Benefits

- ❖ Enriching intellectual activity.
- ❖ Extending the research and knowledge based of the institution.
- ❖ Marketing Benefits.
- ❖ Staff Benefits.
- ❖ Financial Benefits.

4.26 Policy Guidelines

- ❖ Interested Faculty members/ staff will take prior permission from their respective deans. After that case will be forwarded to ORIC.
- ❖ Annual appraisal and student feedback will be considered before assignment of consultancy work to a faculty member
- ❖ Permission may be withdrawn if Faculty Members/ staff performance at UCP gets affected due to consultancy service.
- ❖ Faculty needs to declare any existing consultancy work at the time of induction
- ❖ The applicant will indemnify UCP against all damages, loss, or injury accused, by committing any default or delay in performance of the contractual obligations towards the hiring party/ client.
- ❖ Upon the award of consultancy, Faculty members and staff will submit details to ORIC about its duration, scope, income, hiring of resource person etc.
- ❖ Consultancy revenues will be deposited in UCP account and disbursed as per consultancy details.
- ❖ Consultancy services should be offered individually or as a group of faculty members/ staff depending on the opportunity, nature and scope of work.
- ❖ Any expenditure related to consultancy work shall be covered from within the consultancy amount.
- ❖ Formal contract signing upon award of a consultancy work will be taken care by ORIC.
- ❖ Timely completion as per the agreed terms of consultancy services will be sole responsibility of PI. In case of any default, the faculty members/ staff will be barred from undertaking further consultancies for 2 years.

4.27 Consultancy Projects Executed through ORIC

UCP – ORIC has successfully executed following 8 consultancies.



Sr. No.	Title of Project	Name of PI	Company Details (Name, Country, etc.)	Amount	Project Timelines	Type of Consultancy Services
1	Development of stable famotidine (Ulsin) tablet formulation.	Dr. Muhammad Zaman	Don Valley Pharmaceutical s (pvt.) Ltd	600000	1st Jan 2022 to 30th June 2022	Prototype development
2	Drive improvement of software quality, customer experience, and maintainability of products/features	Mr. Mohsin Abbas	Viral Square	120000	1st Sept 2022 to 30th Nov 2022	Prototype development
3	Conducting research on Hydrogen & Other fuels	Dr. Muhammad Pervaiz	Oil and Gas Regulatory Authority (OGRA)	960,000	6th Sept 2023 to 6th Sept 2024	Testing

4	Consultancy for Crops breeding	Dr. Babar Hussain	Mansab Agro Seeds Pvt. Ltd	20000/visit	03 October 2023 to 3rd October 2024	Testing and Research
5	Consultancy for Crops breeding	Dr. Babar Hussain	Weltop Seeds Ltd.	15,000/consultancy	4 October 2023 to 3rd October 2024	Testing and Research
6	Development of LMS of Hidayat International School	Mr. Usman Afzal	Hint Edu Tech Private Limited	100,000	1st Oct, 2023 to Sept 30, 2024	Prototype development
7	Toxicological studies of more than 80 products	Mr. Sana Jameel and Dr. Imtiaz Majeed	Pacific Pharmaceutical Limited	1000000	15th Nov, 2023 to 14th Nov, 2024	Testing
8	Development of Human Resource Information System (HRIS)	Dr. Muhammad Farooq	ADSolz (IT Company)	2400000	1ST Nov, 2023 to 30th Oct 2024	Prototype development

Chapter No. 5

Industry Academia Linkages



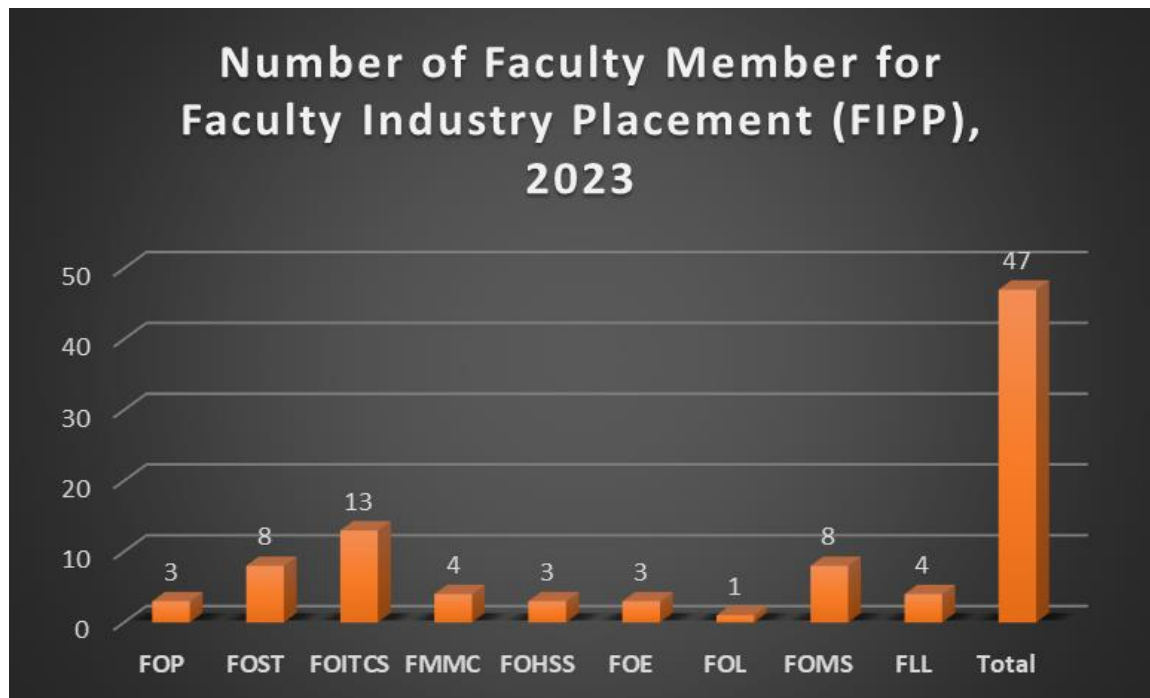
Industry-academia linkages refer to collaborative relationships and partnerships between academic institutions (such as universities and research centers) and industries (businesses, corporations, or organizations operating in various sectors). These linkages are essential for fostering mutual benefits, driving innovation, and bridging the gap between theoretical knowledge and practical applications.

5.1 Faculty Industry Placement Program (FIPP)

Faculty Industry Placement Program (FIPP)

The Faculty Industry Placement Program (FIPP) is a program designed to enhance the synergy between academia and industry by placing faculty members in various industries. The program aims to provide faculty members with invaluable industry insights, enriching the classroom experience for students and ensuring that the curriculum remains cutting-edge. The prime objective of this program is to provide faculty with an opportunity to gain exposure to industrial environments, enabling them to initiate industry-related research, undertake process improvements, promoting Entrepreneurship & Innovation and enhancing employability skills. The program also provides substantial benefits to the industry as the faculty is able to provide them with solutions to the utmost challenges faced by them. The Faculty Industry Placement Program has several benefits for both Academia and Industry. For academia, it provides an opportunity for faculty members to gain exposure to industrial environments, which can help them develop new research ideas and improve their teaching methods. For industry, it provides access to highly skilled professionals who can help them solve complex problems and develop new products and services.

In 2023, 47 Faculty Members were placed in renowned industries such as in IT, Health, Textile, Bio-Tech, Manufacturing industries in Pakistan. This Industry placement was held in the months of August and September, 2023, for a period of one to two weeks as per available time slots by the relevant Industries.



Industrial projects refer to a wide range of initiatives undertaken by businesses and industries to achieve specific objectives related to production, innovation, efficiency, expansion, or other aspects of their operations. These projects are typically designed to enhance productivity, competitiveness, and profitability in the industrial sector.

These projects require careful planning, budgeting, project management, and often cross-functional collaboration within organizations.

FIPP aimed at facilitating the placement of faculty members from academic institutions into industry settings. The goal is to foster collaboration between academia and industry by allowing faculty to gain real-world experience, apply their expertise, and contribute to industry projects. Details of FIPP Programs are as below:

FIPP from July to Sep, 2023				
Faculty Member's Name	Department	Faculty	Name of Industry	Date
Dr. Hassan Ahmad	Pharmaceutics, Pharmacology, Pharmacognosy, Pharmacy Practice, Pharmaceutical Chemistry	FOPS	Drug Testing Laboratory Punjab, Lahore	25-29 September
Ms. Tehseen Riaz			Drug Testing Laboratory Punjab, Lahore	25-29 September
Ms. Izza Tariq			PCSIR Lahore	15 Days (30th Aug to 1st Sept, 6th to 8th Sept, 13th to 15th Sept, 20th to 22nd Sept, 27th to 29th Sept)
Hassan Ahmad			Nova Med Pharmaceuticals	11 September to 16 September.
Mr. Kaleem Ullah	Biotechnology Plant	FOST	Four Brothers group	18 -22 Sep, 2023
Dr Babar Hussain	Biotechnology Genetics Molecular Biology		CEMB	28 Aug - 5st Sep, 2023
Dr. Sumera Zaib	Biochemistry		NovaMed Pharmaceuticals	30 Aug- 5 Sep, 2023
Dr. Amina Arif			Fatima Memorial Hospital	4 Sep- 8 Sep, 2023
Dr. Sajid Mansoor	Microbiology		Textile Testing Industry TTI	21 - 25 Aug, 2023
Dr. Mohsin Gulzar			Atlas Foods	28 Sept to 6 Oct, 2023
Waleed Sultan	Food Science & Technology			Thal Industries Corporation

Muhammad Shehryar			Chamman Foods	September 4 (Monday) to 9 September (Friday) --2 Weeks
Dr. David Samuel Bhatti	Computer Sciences	FOIT & CS	SRC	4 to 8 Sep, 2023
Dr. Mujtaba Asad			SRC	4 to 8 Sep, 2023
Ammar Haider			Gaminators	7 to 12 Aug, 2023
Syed Irteza Muzaffar Shah			Celestial Technology	21 to 25 Aug, 2023
Mr. Ihtisham ul Haq			Code District Software House	21 to 25 Aug, 2023
Dr. Saira Andleeb Gillani			SRC	4 to 8 Sep, 2023
Mr. Husnain Iqbal			TANBITS	18 to 30 Sep, 2023
Ms. Hina Tahir			Software house Innovate Gulberg	4 to 8 Sep, 2023
Mr. Usman Ahmed			CONZUMMATE	21 to 25 Aug, 2023
Muhammad Kashif			NESTOSH	18 to 22 Sep, 2023
Aqdas Tanvir	Software Engineering	FOIT & CS	Codeteck	4 to 8 Sep, 2023
Mr. Imran Ashraf			TANBITS	18 to 25 Sep, 2023
Rana Waqas Ali			TTI	21 to 25 Aug, 2023
Mr. Fahad Khan			Senarios	15 to 21 Aug, 2023

Mr. Farahat Ali	Media and Mass Communication	FMMC	Express	15 to 21 Aug, 2023
Mr. Saleem Akhtar			Express	16 to 21 Aug, 2023
Dr. Ayesha Sadiqa			Message Communication	2 to 8 Aug, 2023
Ms. Tabina Sirhadi			Ultra Club	1 to 7 Aug, 2023
Mr. Adnan Fateh	Psychology	FHSS	Izhar Group	5 to 9 Sep, 2023
Ms. Zarafsheen Khalid			Children Hospital	7 to 12 Aug, 2023
Dr. Arsalan	Economics		LCCI	25-29 Sept, 2023
Mr. Muhammad Farooq	General Education		Saap	25-29 Sept, 2023
Engr. Tanveer Younas	Civil Engineering	FOE	WAPDA	18 to 22 Sep, 2023
Ms. Maria Talib				
Engr. Zain Ul Abideen				
Engr. Aamir Hayat	Electrical Engineering	FOE	SUNEXCELLENCE GREEN ENERGY (PVT)LTD	11 to 15 Sep, 2023
Mr. Nabeel Khalid			Ecube Solutions Pvt Ltd	24 Sep to 6 Oct, 2023
Mrs. Ammara Rizwan	Law	FOL	IPO Lahore	18 to 22 Sep, 2023
Mr. Zeeshan Ashraf			IPO Lahore	18 to 22 Sep, 2023

Dr. Raja Irfan Sabir	Marketing	FOMS	TTI	21 to 25 Aug, 2023
Dr. Nida Zaheer			TANBITS	18 to 22 Sep, 2023
Mr. Mustafa Hannan	Supply Chain		SRC	4 to 8 Sep, 2023
Mr. Sarfraz Rashid			SRC	4 to 8 Sep, 2023
Ms. Sameia Farhat	Business / Management Sciences /HR		SRC	4 to 8 Sep, 2023
Dr. Farooq Tariq Butt			Service Group	7 to 18 Aug, 2023
Dr. Waqar Ahmad			National Tea and High Crop Research Institute	11 to 15 Sep, 2023
Dr. Muhammad Faheem Jan			Mine and Minerals Department of KPK Government	4 to 8 Sep, 2023
Dr. Shahid Nadeem			Blue Stitch Limited	26 Auf to 8 Sep, 2023
Dr. Asad Habib			Languages and Literature	FLL
Mr. Nohaiz Mehmood	Together Group	29 Aug to 1 Sep, 2023		
Dr. Mahwish Farooq	Together Group	30 Aug to 1 Sep, 2023		
Tayyaba Bint e Mehmood	Together Group	31 Aug to 1 Sep, 2023		

5.11 Scope

- ❖ UCP Faculty as industry placement coordinators and workplace assessors.
- ❖ Host organizations.
- ❖ UCP Nominated Faculty undertaking an Industry Placement as required in the approved UCP program.

5.12 Principals

All industry placements must be part of an approved program.

- ❖ The Director ORIC must approve Industry Placements.
- ❖ Arrangements between UCP and the host organization must be in writing.
- ❖ Faculty must participate in an industry placement at a time negotiated between the faculty, the host organization and the UCP industry placement coordinator.

5.13 Industry Placement Provider Eligibility

The University values its relationships with external stakeholders and seeks to develop arrangements for industry placements for mutual benefit.

The University will not accept the following industry placement opportunities:

- ❖ Home-based businesses
- ❖ Commission-only jobs
- ❖ Work involving any illegal activity
- ❖ Any work which requires the employee to purchase a product or service, or offer a security deposit or similar as a condition of employment
- ❖ Any work that will cause expense for the faculty i.e., own use of phone or laptop
- ❖ Any work that requires the use of UCP's equipment for commercial use i.e., film and television cameras, lighting, sound, editing suites.

5.14 Roles and Responsibilities

- ❖ Enable the nominated faculty to apply and extend skills for their particular aptitude in a real working environment with appropriate supervision and guidance.
- ❖ Appoint a host staff member to supervise the nominated faculty whilst on industry placement.
- ❖ Conduct a training to the work site.
- ❖ Provide Industry Placement feedback or reports to ORIC for evaluation.
- ❖ Support the nominated faculty at all times and facilitate access to the workplace by UCP FILO who will support and assess.
- ❖ Inform Faculty that they must comply with the organization's policies and rules with respect to confidentiality, behavior and discipline whilst undertaking a placement.
- ❖ Provide the appropriate facilities, equipment and learning experiences for the Faculty members, taking into account the level of the Faculty Member's skills and Experience.
- ❖ Notify the University if the Faculty member does not meet agreed attendance Requirements.
- ❖ Maintain confidentiality regarding the University's confidential information
- ❖ Appropriately manage records relating to the Faculty member including attendance and progress reviews.

**5.15 Potential Research Areas identified by ORIC & Faculty Members
during FIPP**

Sr. No.	Faculty	Research Areas
1.	FOST	<ul style="list-style-type: none"> ➤ Signal Transduction ➤ Membranes and Transport Mechanisms ➤ Protein Structure and Dynamics ➤ Molecular Medicine and Drug Discovery ➤ Computational Biology ➤ Biomaterials ➤ Cancer Biotechnology ➤ Cardiovascular Biology and Transplantation Biology ➤ Cell and Molecular Biology ➤ Developmental Biology and Neurobiology ➤ Diagnostics and Medical Devices ➤ Drug Discovery and Delivery ➤ Microbial and Environmental Biotechnology ➤ Nanobiotechnology ➤ Stem Cell Biology ➤ Sustainability and Global Health Biotechnology ➤ Synthetic and Systems Biology ➤ Microbial Food Safety ➤ Sensory and Consumer Science, Food Choice, and Eating Behavior ➤ Seed Science

2.	FOIT&CS	<ul style="list-style-type: none"> ➤ Weather Forecasting APP. Type: Application development, Web development, Programming. ➤ AI, data science and robotics ➤ Big Data Analytics ➤ Biometrics and Computational Biology ➤ Data Mining and Databases ➤ Blockchain and Decentralized Systems ➤ News Feed App ➤ Optical Character Recognition System (OCR). ➤ Library Management System. ➤ Virtual Private Network. ➤ e-Authentication System. ➤ Real-time web search engine. ➤ Task Management Application ➤ Health technologies ➤ Defense technologies ➤ AI and Cyber Physical System ➤ Networking and Embedded Systems ➤ Computer Vision and Augmented Reality ➤ Wireless Networks and Distributed Systems
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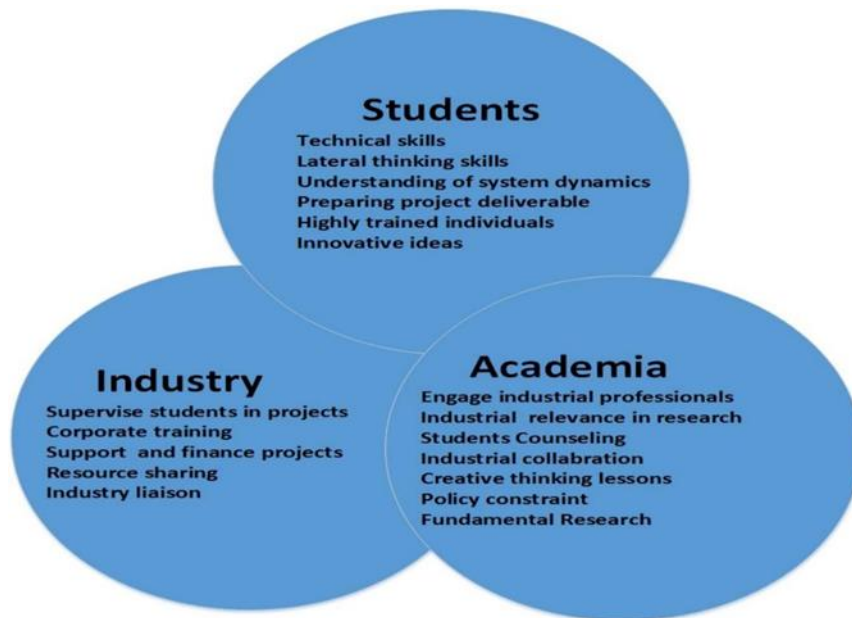
3.	FOE	<ul style="list-style-type: none"> ➤ Circuits and VLSI ➤ Computer Engineering and Architecture ➤ Robotics and Control ➤ Signal Processing ➤ Health technologies ➤ Defence technologies ➤ Fluid Mechanics ➤ Materials ➤ Robotics and Control ➤ Soft Matter ➤ Solid Mechanics ➤ Surface and Interface Science ➤ Chemical & Petroleum Engineering
4.	FOPS	<ul style="list-style-type: none"> ➤ Drug Delivery ➤ Pharmacokinetics ➤ Clinical Pharmacology and Translational Research; Comparative Effectiveness; Pharmacometrics ➤ Development of new bio-analytical technologies for quantitative profiling of metabolites and proteins ➤ Development of molecular simulation and data science tools for drug and materials design.
5	FOL	<ul style="list-style-type: none"> ➤ Develop software for Centralized E-IPO proceedings for registration and certification of the Patent, Copyright, Trademark, Design. ➤ Pakistan joined the Madrid Protocol of WIPO on 24th February 2021 and ratified it on 24th May 2021: The Studies on its Benefits, Consequences and Outcomes. ➤ Why has Pakistan not joined the PCT (Patent Cooperation Treaty)? If joined what would be the benefits, Consequences, and Outcomes? ➤ Research on Geographical Identification, Benefit Sharing Mechanism in Intellectual Property Rights, what model do we need for Plant Breeding rights?

6	FLL	<ul style="list-style-type: none"> ➤ Corpus Linguistics ➤ Critical Discourse Analysis ➤ Genre Analysis ➤ Historical Linguistics ➤ Language Learning and Assessment ➤ Language Acquisition ➤ Language for Specific Purposes ➤ Lexicology ➤ Morphology ➤ Phonetics and Phonology ➤ Pragmatics ➤ Psycholinguistics ➤ Semantics ➤ Semiotics ➤ Sociolinguistics ➤ Discourse Analysis ➤ Stylistics ➤ Syntax ➤ Functional Linguistics ➤ Translation Studies
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7	FHSS	<ul style="list-style-type: none"> ➤ Cultural Diversity ➤ medical sociology ➤ research ethics ➤ sociology of violence ➤ the history of ideas ➤ race, colonization and development ➤ feminist theory ➤ global governance, aid and development, human rights ➤ immigration, citizenship and political representation ➤ Ethics—including ethical theory (e.g. are moral properties real?), moral psychology, the ethics of technological change, virtue theory and the philosophy of mental health and mental disorder ➤ Feminism in the corporate place: a critical analysis of the challenges and opportunities for women in leadership positions. ➤ The political impact on the protection of minority groups: a comparative study of different countries and regions and how their political systems affect the rights and representation of minorities. ➤ The effects of social media on teens and youths: an empirical investigation of the psychological, social, and educational impacts of social media use among young people. ➤ The worldwide impact of corruption: a quantitative assessment of how corruption affects economic development, social welfare, and environmental sustainability in different contexts. ➤ The ethics of AI: a philosophical exploration of the moral implications and challenges of artificial intelligence and its applications.
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8	FMMC	<ul style="list-style-type: none"> ➤ Multimedia storytelling ➤ Proficiency in various media production forms such as writing, photography, video editing, and graphic design ➤ Health and Science Communication ➤ Media Representation and Diversity ➤ Social Media ➤ Youth and Scholastic Media ➤ Sports Media ➤ Digital Inclusion ➤ Media and Information Literacy ➤ Public Relations and Advertising ➤ Local Journalism ➤ Crisis Communications ➤ History ➤ Media Law & Ethics ➤ Health Communication ➤ Political Communication
9	FOMS	<ul style="list-style-type: none"> ➤ Managing technology & innovation ➤ Resources management & sustainable development ➤ Social entrepreneurship ➤ Corporate responsibility, ethics & accountability ➤ Organizational behavior and human resource management ➤ Marketing and consumer behavior ➤ Finance and accounting ➤ Operations and supply chain management ➤ Entrepreneurship and innovation ➤ Strategic management and international business ➤ Parameters to study performance in an industry: ServQual, Balance score card approach ➤ Developing a project management methodology for a specific industry or organization ➤ Language barriers and how multinational management works ➤ The history and role of women in entrepreneurship.

5.16 ORIC Recommendations



- i. Faculty industry placement is a good initiative and intra-active approach for mutual collaboration of industry and academia.
- ii. Identification of specific needs, problems etc. that the host industry is currently facing. What are the expectations of host industry? This will enable you initiate a project proposal after you return, under HEC research funding schemes like TDF etc. with possible IP generation leading to commercialization thereafter.
- iii. See the possibility of new products and methodologies that could improve competitiveness of the host industry. You may identify UCP School / faculty that could be engaged further to add value to the host industry through a multidisciplinary project. Again, this will enable you initiate a project proposal after you return, under HEC research funding schemes like TDF / NRPU etc. with possible IP generation leading to commercialization thereafter.
- iv. It will build lasting relationship with the local professionals and industry players who could in many ways support the mission of the university.
- v. Faculty placements can help the university reach a better understanding of what the industry experts expects from faculty of its departments.
- vi. The program will allow academia to better match its faculty members' capabilities with industry needs

5.2 Industrial Academia Linkages (IAL) Industrial Visits/ Meetings

Details of the number of visits by Representatives of Industry or Community Members regarding potential research subjects.

Sr. No.	Name of Visitors	Date of visit	Agenda of visit
1	<ul style="list-style-type: none"> ❖ Mr. Najam Ul Hassan Butt- Manager Bahria Projects ❖ Mr. Mudassir Hussain -GM Construction ❖ M. Noman Hussain Siddiqui 	16 th Feb, 2023	"Industrial Visit at Bharia Town Lahore: Discussion on Mutual Areas of Research for Collaboration, Faculty Industry Placement Program (FIPP) And Student Internships"
2	<ul style="list-style-type: none"> ❖ Mr. Arsalan Nadeem, Asst Manager, R&I PCMA ❖ Mr. Muhammad Saeb, Head of Pakistan Chemical Expo 	20 th Feb, 2023	"Meeting with PCMA (Pakistan Chemical Manufacturers Association): Discussion on Mutual Areas of Research for Collaboration, Faculty Industry Placement Program (FIPP)"
3	<ul style="list-style-type: none"> ❖ Mr. Arshad Javed Kayani, Secretary General PEMA ❖ Mian Amer Rasheed, Premier Industrial Chemicals Mfg. Pvt. Ltd Sheikhupura 	1 st Mar, 2023	"Meeting on Research Collaboration with Sugar Industry through PEMA: Discussion on Mutual Areas of Research for Collaboration & Faculty Industry Placement Program (FIPP)"

4	<ul style="list-style-type: none"> ❖ Mr. Chela Ram Kewlani, Chairman REAP ❖ Mr. Ali. Narang, M/S East Rice Company (Pvt) Ltd ❖ Mr. Ali Hussam Asghar, Ali Commercial Corporation (Former Chairman REAP) ❖ Mr. Haseeb Ali Khan, Senior Vice Chairman-REAP ❖ Ch. Sami Ullah Naeem, Atlas Food (Pvt) Ltd ❖ Mr. Taufiq Ahmad Khan, Ahmad Associates ❖ Habib-ur-Rehman, Vice Chairman, Ishfaq Commodities ❖ Asif Ali Shiekh, M/S Asif Rice Mills ❖ Mr. Kashif-ur-Rehman, S.G. REAP 	13 th Mar, 2023	<p>"Meeting for Research Collaboration with REAP (Rice Exporter Association of Pakistan): Discussion about Aflatoxin and Pesticides as a major challenge of Rice Industry; Importance of Industry Academia Linkages. The aim of the meeting was to strengthen interaction and research collaboration between the UCP Faculty and REAP".</p>
5	<ul style="list-style-type: none"> ❖ Mr. Ghulam Murtaza, Secretary General PAPAM ❖ Umair Nisar Malik, Manager R&D PAPAM 	22 nd Mar, 2023	<p>"Meeting for Research Collaboration with PAPAM (Pakistan Association of Automotive Parts & Accessories Manufacturers) : Discussion on major issues faced by Automotive Industry and emphasis on the study of Regional Competitiveness and Localization Study to increase exports of Pakistani engineering products.</p> <p>The Importance of Industry Academia Linkages. The aim of the meeting was to strengthen interaction and research collaboration between the UCP (FOE) faculty and PAPAM. "</p>

6	<ul style="list-style-type: none"> ❖ Mr. Ali. Narang, CEO East Rice Company (Pvt) Ltd. ❖ Mr. Usman, Director Technical Production/Marketing. 	29 th Mar, 2023	"Meeting on Research Collaboration with East Rice Company Pvt. Ltd: Discussion on the Importance of Industry Academia Linkages. The aim of the meeting was to strengthen interaction and research collaboration between the UCP Faculty and East Rice Company (Pvt) Ltd".
7	❖ Dr. Rizwan Naseer, DG Rescue 1122	19 th April, 2023	"Meeting on Research Collaboration with Rescue 1122: Discussion on importance of joint/collaborative research and academia role in solving Rescue 1122 challenges/Problems".
8	❖ Mr. Arshad Javed Kayani, Secretary General, PEMA	3 rd July, 2023	The agenda of the meeting was to strengthen interaction between the UCP Faculty and the personnel from the sugar industry. The discussions focused on industrial issues and their possible solutions by the UCP Researchers i.e., treatment of waste water to reduce COD and conversion of ethanol into biofuel/biodiesel.
9	❖ Mr. Ali. Narang, CEO East Rice Company (Pvt) Ltd. East Rice Company	24 th Aug, 2023	<p>"CEO East Rice Company Welcome the delegates of UCP Scientists/Researchers. He briefed about two major challenges of Rice Industry;</p> <ul style="list-style-type: none"> ❖ Degradation of Aflatoxins in Brown Rice and affecting export of Brown Rice to Europe. ❖ Degradation of Pesticides Residue in Paddy and Rice. <p>Dir. ORIC highlighted the Importance of Industry Academia Linkages. The aim of the meeting was to strengthen interaction and research collaboration between the UCP Faculty and East Rice Company (Pvt) Ltd."</p>

10	<ul style="list-style-type: none"> ❖ Dr. M. Qadir Ahmad, Associate Professor, BZU ❖ Muhammad Ashfaq, CEO and Founder, Mansab Agro Seeds Pvt. Ltd. 	30 th Oct, 2023	The aim of the meeting was to strengthen interaction between the UCP Faculty and the personnel from the seed industry. The discussions focused on industrial issues and their possible solutions by the UCP Researchers i.e. collaboration in seed production of cotton, rice, wheat and garlic.
11	<ul style="list-style-type: none"> ❖ Dr. Sultan Mahmood, CEO, Weltop Seeds 	30 th Oct, 2023	The aim of the meeting was to strengthen interaction between the UCP Faculty and the personnel from the sugar industry. The discussions focused on industrial issues and their possible solutions by the UCP Researchers i.e., treatment of waste water to reduce COD and conversion of ethanol into biofuel/biodiesel.
12	<ul style="list-style-type: none"> ❖ Tauseef-ur-Rehman Khan, Deputy General Manager Central a China Mobile Company 	15 th Dec, 2023	The agenda of the meeting was to strengthen interaction between the UCP Faculty and the personnel from the sugar industry. The discussions focused on industrial issues and their possible solutions by the UCP Researchers i.e., treatment of waste water to reduce COD and conversion of ethanol into biofuel/biodiesel.
13	<ul style="list-style-type: none"> ❖ UCP-ORIC Meeting on Commercialization of Products and Establishment of Subsidiary Company 	22 nd Dec, 2023	Meeting was arranged by ORIC and held on December 22, 2023 (Friday) at 12.00 PM at Board Room, Takhleeq Building, UCP. Dean FOST convened the meeting with the objective to take actions as per direction of the worthy Pro-Rector (Meeting held on 19-12-2023 in Pro-Rector Office) and proposal of Pollux pure (Pvt). Ltd was discussed for collaboration

Chapter No. 6

Memorandum of Understanding (MoU)

6.1 Introduction

An MoU, or Memorandum of Understanding, is a formal agreement between two or more parties that outlines the terms and details of their mutual understanding or cooperation on a specific project, initiative, or relationship. While an MoU is not legally binding like a contract, it signifies a commitment to work together and provides a framework for collaboration.



6.2 Purpose

The purpose of this MOU is to develop academic and educational cooperation on the basis of equality and reciprocity and to promote sustainable partnerships and mutual understanding between the University. The Memorandum of Understanding (MoU) between universities serves various purposes, fostering collaboration and partnership between academic institutions.

- ❖ Academic Collaboration.
- ❖ Research Partnerships.
- ❖ Student Exchange Programs.
- ❖ Joint Conferences and Seminars.
- ❖ Quality Assurance and Accreditation.
- ❖ Technology Transfer and Innovation.

6.3 MoU detailed list for year 2022 – 2023

Sr. No.	(Academic or Research)/ (International or National)	Department/ Country	Date / Duration	Scope	Field
1	Academic/ International	"Department of Environmental Health Sciences, School of Public Health, University at Albany, USA"	26 Sep, 2023/ Indefinite	Research & Exchange Programs, Collaborative Projects	Basic & Applied Chemistry
2	Industrial/ National	Elite Nutrify	22 July, 2022/ Indefinite	Academia-Industry Collaborative initiatives	Food Science & Technology
3	Industrial/ National	Enrichers Investment Group, Pakistan	3 Jan, 2023/ 3 Years	Research & Exchange Programs, Collaborative Projects	Basic & Applied Chemistry
4	Industrial/ National	Urban Pest Management, Pakistan	13 Feb, 2023/ 1 Year	Research & Exchange Programs, Collaborative Projects	Food Science & Technology

5	Industrial/ National	IFANCA Pakistan Halal Apex Private Limited Pakistan	14 Feb, 2023/ 1 Year	Research & Exchange Programs, Collaborative Projects	Food Science & Technology
6	Industrial/ National	"Veterinary Diagnosti, Lahore, Pakistan"	14 Feb, 2023/ 1 Year	Research & Exchange Programs, Collaborative Projects	Basic & Applied Chemistry
7	Industrial/ National	NovaMed Pharmaceuticals, Lahore, Pakistan	22 Feb, 2023/ 1 Year	Research & Exchange Programs, Collaborative Projects	Basic & Applied Chemistry
8	Academic/ National	COMSATS Lahore Campus	1 Mar, 2023/ 1 Year	Research & Exchange Programs, Collaborative Projects	Microbiology
9	Academic/ National	"National Allied Legal Services Pakistan"	31 July, 2022/ Indefinite	Summer Internship	Law (Law Offices are paid for the internship)

10	Academic/ National	"Humayuns Legal & IP Consultants, Pakistan"	31 July, 2022/ Indefinite	Summer Internship	Law (Law Offices are paid for the internship)
11	Academic/ National	"Sampat & Sampat Law Associates, Pakistan"	31 July, 2022/ Indefinite	Summer Internship	Law (Law Offices are paid for the internship)
12	Industrial/ International	SWSAM Solutions - United Kingdom, Pakistan	22 Sep, 2022/ 3 Years	All areas of mutual interest	Electrical Engineering
13	National/ Industrial & Research	Pacific Pharmaceuticals, Pakistan	19 Oct, 2022/ 2 Years	Consultancy, Joint research Conferences, Job placements.	Pharmacy
14	National/ Industrial & Research	Saffron Pharmaceuticals, Pakistan	19 Oct, 2022/ Indefinite	Research Projects, Consultancy, Job Opportunities.	Pharmacy
15	National/ Industrial & Research	Servaid Pharmacy, Pakistan	19 Oct, 2022/ Indefinite	Job placement of UCP students	Pharmacy
16	National/ Industrial & Research	Dr. Masood Homoeopathic Pharmaceuticals, Pakistan	21 Dec, 2022/ Indefinite	Job Opportunities, Research Projects, Curriculum Development	Pharmacy

17	National/ Industrial & Research	Drug Regulatory Authority, Pakistan	13 Feb, 2023/ Indefinite	Scientific meetings, Trainings, Academic & research collaboration.	Pharmacy
18	International/ Academic	DW Akademie, Germany	26 July, 2022/ 3 Years	Research & Exchange programs	Research & Media Education
19	National/ Academic	Lahore Waste Management Authority, Pakistan	27 Oct, 2022/ 1 Year	Academia-Industry Collaborative initiatives	
20	National/ Academic	Emergency Operation Centre Punjab (EOCP)	11 April, 2023/ 1 Year	Academia-Industry Collaborative initiatives	Development Sector
21	National/ Academic	"Ajoka Theatre, Pakistan"	12 Dec, 2022/ Indefinite	"Students Internship Industrial Visits "	Languages & Literature
22	National/ Academic	"Daastan Publishing House, Pakistan"	12 Dec, 2022/ Indefinite	"Students Internship Industrial Visits "	Languages & Literature
23	National/ Academic	"Chanan Development Association-CDA, Pakistan"	24 Jan, 2023/ Indefinite	"Students Internship Industrial Visits"	Languages & Literature

24	National/ Academic	"Family Educational Service Foundation –FESF Deaf Reach School & Training Centre, Pakistan"	24 Jan, 2023/ Indefinite	"Students Internship Industrial Visits "	Languages & Literature
25	National/ Academic	"Interactive Resource Centre - Maati TV, Pakistan"	24 Jan, 2023/ Indefinite	"Students Internship Industrial Visits "	Languages & Literature
26	National/ Academic	ZAPTA Technologies, Pakistan	26 Dec, 2022/ Indefinite	Research, Learning and Innovation	Web and Mobile Application Development
27	National/ Academic & research	InvoZone, Pakistan	24 Jan, 2023/ Indefinite	Community Engagement, Develop and Commercialize Collaboration	"Block Chain Research and Developmen, Machine Learning"
28	National/ Academic	PNY Trainings, Pakistan.	28 Dec, 2022/ Indefinite	Trainings Collaboration on latest Technology Trends	MERN Stack, Amazon Web Services, Azure, Cross Platform App Development
29	National/ Academic	HR Knowledge Cafe, Pakistan	7 Feb, 2023/ Indefinite	Technology Innovation, Job Opportunity Awareness	Employability of Graduates in Software Houses all over Pakistan
30	National/ Academic	Knowledge Streams, Pakistan	19 May, 2023/ Indefinite	Corporate Training Facility	University Alliance Partnership

31	National/ Academic	Mughal Iron & Steel Industries, Pakistan	20 Sep, 2022/ 1 Year	"Students Internship Industrial Visits"	Operations & SCM
32	National/ Academic	Herbion Pakistan	11 Nov, 2022/ 1 Year	"Students Internship Industrial Visits"	Operations & SCM
33	National/ Academic	Lahore Chamber of Commerce & Industry, Pakistan	31 Aug, 2022/ Indefinite	"Students Internship Industrial Visits"	Commerce
34	National/ Academic	Nadeem & Co. (Chartered Accountant), Pakistan	1 May, 2023/ Indefinite	"Students Internship Industrial Visits"	Commerce
35	National/ Academic	MAB Biz Solution (Private) Limited (MAB), Pakistan	9 Jan, 2023/ Indefinite	"Students Internship Industrial Visits"	Commerce
36	National/ Industrial & research	Walled City of Lahore, Pakistan	4 Jan, 2023/ Indefinite	"Students Internship Industrial Visits"	Humanities & Social Sciences

37	National/ research	China University of Geosciences, China	15 Aug, 2022/ 5 Years	Research & Exchange Programs, Collaborative Projects	International Relations & Political Science
38	International/ research	School of Foreign Languages, China	11 Oct, 2022/ 4 Years	Research & Exchange Programs, Collaborative Projects	International Relations & Political Science
39	National/ research	Sangat	26 Jan, 2023/ Indefinite	Research & Exchange Programs, Collaborative Projects	International Relations & Political Science
40	National/ Academic	Ali Aslam Awan & Co	21 July, 2023/Summer internship 6-8 week during Aug & Sep	Summer Internships	Law and Legal Education
41	National/ Academic	Saqlain and Hussain Advocates	27 July, 2023/Summer internship 6-8 week during Aug & Sep	Summer Internships	Law and Legal Education
42	International/ Academic	University of central lancashire, United Kingdom	23 Aug, 2023	Research and Development	Research and Development

43	National/ Research	IEEE Lahore Section	17 Nov, 2023	Research and Development	Research and Development
44	National/ Research	Helping Hand for Relief and Development – HHRD, Pakistan	5 Sep, 2023	Research and Development	Research and Development
45	National/ Research	Institute of Career Development, Pakistan	5 Sep, 2023	Research and Development	Research and Development
46	National/ Research	Together, Pakistan	5 Sep, 2023	Research and Development	Research and Development
47	National/ Research	Global Halal Seviles (GHS), Pakistan	27 Oct, 2023	Research and Development	Research Trainings
48	National/ Research & Academic	National Alliance for Safe Food	27 Oct, 2023	Research and Development	Trainings Accreditations Consultancy
49	National/ Research & Academic	Mass Pharma	12 Oct, 2023	Research and Development	"Research, Internships, industrial visit Trainings"
50	National/ Professionals	Pakistan	13 Sep, 2023	Students Internships and Jobs	Professional Journalism

Chapter No. 7

ORIC Scorecard 2022 - 2023

1.1 Introduction

In order to quantify the performance verses envisioned research and commercialization profile of the ORICs, an Annual Performance Scorecard has been designed. The Scorecard has four (04) broader domains and activities and each has further Key Performance Indicators. The broader domains include:

- ❖ Human Resource & Operations
- ❖ Research Excellence
- ❖ Innovation & Commercialization
- ❖ Sustainability & Capacity Building

Each KPI is quantified by relevant measurable activity and each activity is allocated a score in accordance with its relativity.

Self-Evaluation Scores 2022 - 2023			
Sr. No.	Key Performance Indicator	Total Score	Score Obtained
1	Human Resource and Operations	10	10
2	Research Excellence	45	17
3	Innovation And Commercialization	30	13.5
4	Sustainability And Capacity Building	15	11.5
TOTAL		100	52

Self-Evaluation Scores Target 2023 - 2024			
Sr. No.	Key Performance Indicator	Total Score	Score Obtained
1	Human Resource and Operations	10	10
2	Research Excellence	45	25
3	Innovation And Commercialization	30	15
4	Sustainability And Capacity Building	15	12
TOTAL		100	62

Chapter No. 8

Workshops & Events Organized by ORIC

Workshops and events play a crucial role in various aspects of personal, professional, and organizational development. Their importance extends to education, skill-building, networking, and community engagement. Workshops and events provide opportunities for professional development, including certifications, continuing education credits, and career advancement resources.



ORIC organizes 6 workshops on IPs in which Ms. Shakra Khurshid (Assistant Controller of Patent) was a resource person and 2 RPG's workshops. Details are as under:

8.1 Workshop on Intellectual Property (IPs)

Sr. No.	Topic	Date	Time
1.	IPs Basic Concepts with Application Procedure	23 rd Aug, 2023	2:00 – 4:00 pm
2.	Introduction to Design and Application Procedure	30 th Aug, 2023	2:00 – 4:00 pm
3.	Introduction to Copyrights and Application Procedure	7 th Sep, 2023	2:00 – 4:00 pm
4.	Introduction to Patent Systems in Pakistan and Filing Guidelines	13 th Sep, 2023	3:30 – 5:00 pm
5.	Patent Drafting Techniques	20 th Sep, 2023	2:00 – 4:00 pm
6.	Ips Workshop on Exercise for Drafting Techniques	27 th Sep, 2023	2:00 – 4:00 pm

8.2 Workshop on Research Proposals and Grants (RPGs)



Workshop on **Research Proposals & Grants Challenges and Opportunities**



DATE
25th-26th, Sep 2023



TIME
09:30 AM - 11:30 AM



VENUE
(Takhleeq Basement Board Room)

8.3 Expo Events Visits Organized by ORIC

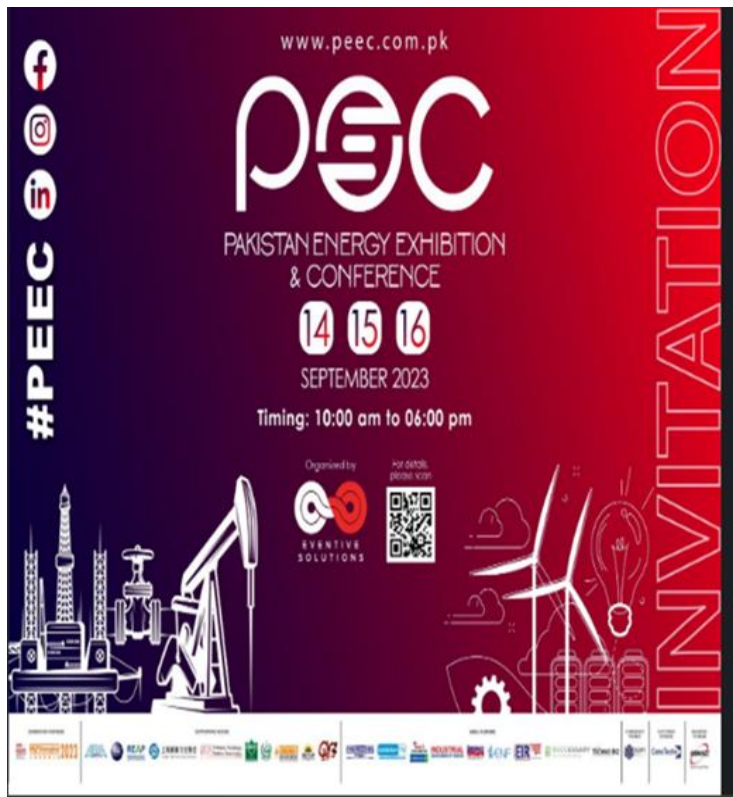
Purpose:

Students can interact with the industry to gain practical experience, network, and prepare for their future careers.

- ❖ Students get knowledge about projects, learn industry-specific skills, and build professional connections.
- ❖ Cooperative education (co-op) programs combine academic study with the experience in the industry.
- ❖ This event offers students a chance to network with industry professionals and learn about potential career paths.

Industrial projects allow students to understand real-world problems and contribute to the advancement of industry knowledge.

8.31 Pakistan Energy Exhibition & Conference



8.32 Pakistan Paint & Construction Chemicals



UCP exhibited a stall at that event. It could be a great opportunity to showcase the university's programs, services, and culture to a diverse audience. Both faculty member and students with their team efforts designed an attractive and informative booth. Banners, posters, brochures, and multimedia are displayed to highlight the university's strengths, academic programs, research initiatives, and campus facilities. Ensure that the booth was visually appealing and reflects our institution.

8.33 PHEC Announced 2nd All Punjab Universities Innovation Expo 2023

Dr. Shahid Munir shared the objectives of Innovation Expo 2023, emphasizing its role in boosting research spirit across universities. The event will feature as many as 500 research projects and innovative ideas, with a focus on encouraging students who excel in research project models by rewarding them. All universities in Punjab are encouraged to participate in the Expo, while 11 universities in Punjab have been chosen as partners for Expo 2023. 10 Projects from UCP are selected to be displayed in this exhibition.

Detailed list of projects for the year 2023 are mentioned below:

PHEC Expo Project displayed for year 2023

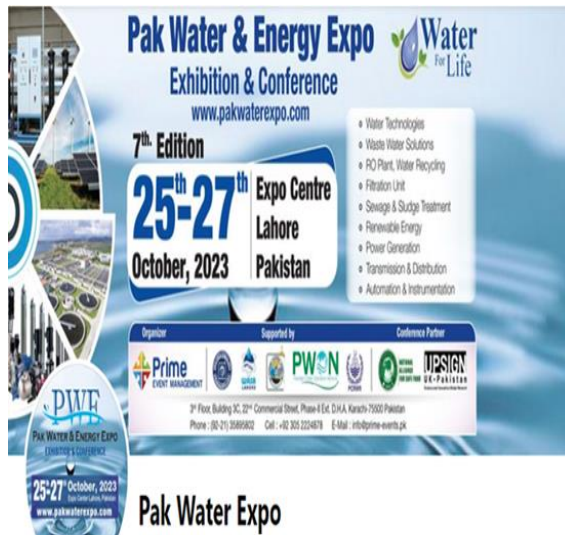
Sr. No.	Project Title	Brief Summary of the Project
1	Ecologique	The idea behind this advertising campaign is to promote the our brand which is eco-friendly toys and to highlight the benefits of choosing sustainable options for children's playtime. Écologique is to provide eco-friendly toys made from bamboo and felt sheets which are sustainable, non-toxic, and biodegradable.
2	In-Line Holographic Microscope	Our project, "Digital In-line Holographic Microscope," combines holography and digital microscopy to capture and reconstruct 3D images of microscopic specimens. It goes beyond traditional 2D microscopy, utilizing holographic techniques to record both amplitude and phase information of light waves scattered by a sample, enabling detailed 3D structural and morphological analysis.
3	ArthroSol	Preparation and evaluation of Sol-gel triple therapy for the treatment of arthritis
4	Depress-NOT (Hypericin-nasal drops)	Preparation and evaluation of intra-nasal spray for the treatment of depression.
5	Tical Clot	Preparation and evaluation of SNEDDS for the treatment of Congestive Heart Failure
6	Inno Vision	A Digital Microscope with Web Camera is a microscope that is equipped with a digital camera and can be connected to a computer or other device for image capture and analysis. The Digital Microscope with Web Camera typically has a magnification range of 10x-40x, and is equipped with a CMOS sensor camera. The microscope is designed to be compact and portable, and can be easily connected to a computer or other device through a USB port.
7	Bioenforce	A Biosafety Cabinet Level 2 (BSC-2) is a laboratory device used to protect the operator, the environment, and the sample being worked on from potentially harmful biological agents. The BSC-2 is designed to provide a physical barrier between the operator and the sample being worked on.
8	Oolong tea with beetroot powder	Oolong tea is a special rich tea full of antioxidants. To increase its nutritional and anti-oxidant capacity, we are incorporating beetroot powder in it.
9	Quinoa, Grapeseed bar	In recent years, functional bars have become more and more well-liked as quick and wholesome snacks. We looked at adding a quinoa-grapeseed powder blend to protein-fiber-rich bars to increase their nutritional content.
10	Gluten free pomace cookies	In recent years, waste by juice industries is a major problem. This waste contains many beneficial nutrients which can be used for enrichment of gluten free products. So, we add pomace in gluten free cookies to increase their fiber content.

8.34 Build Pakistan & Concurrent shows



The event delivered a powerful combination of senior decision makers and purchase influencers from across Pakistan's industrial, commercial and public sectors. With a compelling range of unique educational content available to the visitor and a wide and varied exhibitor offering, this was the “must attend” event for all professionals related to construction industry.

8.35 Pak – Water and Energy Expo



Pak Water & Energy Expo is the most proactive platform for the Water & Energy Industry. This Expo offers exciting business opportunities for exhibitors to showcase their products and technologies, as well as for trade visitors from the Water and Energy Industry to interact under one roof. This event purely focuses on providing a business platform for exhibitors and visitors to establish a business network among themselves and become aware

of the latest trends and technologies in the Water and Energy industry.

8.36 7th Pakistan Industrial Expo 2023

7th Pakistan Industrial Expo recently concluded at the Lahore Expo Centre, the organizers have announced plans to set up a “Pakistan Pavilion” at their forthcoming events in South Africa, Kenya, the UAE and Saudi Arabia to promote Pakistani products.

Around 250 Pakistani and Chinese companies were showcasing their products and services at this event.



8.37 Sprint Pakistan



Takhleeq Business Incubator, in collaboration with the Bank of Punjab & National Incubation Center, brought innovation to life at the Sprint Pakistan Hackathon at Takhleeq on Monday, 16th October 2023. The event showcased the immense talent and creativity of our participants, and the atmosphere was charged with energy and excitement.

Chapter No. 9

ORIC Newsletter



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Chapter No. 10

Conclusion

Under the umbrella of the Higher Education Commission (HEC), University of Central Punjab established the Office of Research, Innovation, and Commercialization (ORIC). The establishment's (ORIC) goal is in line with HEC's: to create, enhance, and oversee the university's research initiatives and build clear connection between research endeavors and the academic, social, and commercial interests of the university and the community at large. The ORIC is also given the responsibility of making sure that the caliber of the research meets the highest international standards and elevates the university's standing among the world's leading research institutions.

The ORIC is charged with carrying out its goal by making sure that all research programs and policies uphold the fundamental principles of academic freedom, professional integrity, and ethical behavior, as well as complete adherence to all university regulations, legal mandates, and operational standards.

The ORIC aims to enhance the context for all research and linkages through:

- ❖ Enhancing the strategic research priorities and policies of the university
- ❖ Increasing and changing the sources of independent research funding.
- ❖ Enhancing the hiring and retention of outstanding teachers.
- ❖ Enhancing the university's overall integration of research and instruction.
- ❖ Enhancing the application of research for the good of the public.
- ❖ Developing linkages between industry and universities.
- ❖ Fostering entrepreneurship, technological transfer, and commercialization efforts which stimulate and strengthen the regional and national economies.
- ❖ Encouraging and strengthening multidisciplinary and cross-cutting research projects

10.1 ORIC Upcoming Activities

Sr. No	Event Name	Faculty	2024 Q3			2024 Q4			2024 Q1			2023 Q2		
			JAN	FEB	MAR	APR	MAY	JUNE	JUL	AUG	SEPT	OCT	NOV	DEC
1.	PHEC Innovation Expo	FOST, FOE, FOIT											20 th	
2.	7th Pakistan Industrial Expo 2023	FOE											25-27	
3.	International Dairy Expo	FOST	21-22											
4.	9th Pakistan Mega Leather Show 2024	FOST	26-28											
5.	Future Fest	FOIT	26-28											
6.	37th Lahore International Book Fair (LIBF) 2024	All Faculties		1-5 th										
7.	Pak Pharma & Healthcare Expo	FOPS		21-25										
8.	PAKISTAN SUSTAINABILITY WEEK 2024	FOIT, FOE, FOST		27-29										
9.	AGRI CONNECTION EXPO					24-25								
10.	ISEM – International Solar Energy Meet	FOE, FOIT					17-19							
11.	Pakistan Ethanol Manufacturing Association (PEEMA)	FOST						13-14						
12.	PPMA (Pakistan Pharmaceutical Manufacturing Association)	FOP						25-26						

10.2 ORIC Action Plans

Research Enhancement: <ul style="list-style-type: none"> ➤ Foster a culture of research excellence ➤ Encourage faculty and researchers to engage in high-impact research projects ➤ Promote interdisciplinary collaboration and partnerships. ➤ Establish research centers and labs for specialized research areas. ➤ Evaluate research progress and impact. 	Innovation and Technology Transfer: <ul style="list-style-type: none"> ➤ Facilitate the commercialization of research outcomes and inventions. ➤ Establish industry partnerships and collaborations for technology transfer. ➤ Promote innovation and entrepreneurship among students and faculty. ➤ Create technology transfer offices to facilitate commercialization. 	Industry Engagement: <ul style="list-style-type: none"> ➤ Collaborate with companies on research and development initiatives. ➤ Facilitate industry-sponsored research projects. ➤ Develop internship and co-op programs with local companies. ➤ Organize industry-specific events and forums for collaboration. 	International Collaboration: <ul style="list-style-type: none"> ➤ Foster international research collaborations and partnerships. ➤ Promote participation in international conferences and networks. ➤ Seek external funding for collaborative international initiatives.
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