

The AKU Pre-University Summer School Programme

Start your education journey today!

A: Courses on Offer: You must choose one course from among the following:

	Course Name	Introducing the Facilitators	About the Course
1	<i>Climate Change and Environmental Sustainability</i>	<p>Dr Fozia Parveen An Assistant Professor at Aga mKhan University's Institute for Educational Development (AKU-IED) is an environmental scientist and holds a DPhil degree in Engineering Science from the University of Oxford, MS and undergrad in environmental sciences from the National University of Science and Technology and Fatima Jinnah Women University, respectively. Her research has focused on wastewater treatment, water management, and microplastic pollution. The link to her TEDx Lahore talk is given here: https://www.facebook.com/akuiedpk/videos/3408450796056409/</p> <p>Her Publications can be viewed at https://scholar.google.com/citations?user=DleKx2UAAAAJ&hl=en</p>	<p><i>By the end of the course the students will be able to Understand key terms and concepts related to environment and climate change.</i></p> <p><i>Understand how environmental sustainability can be achieved.</i></p> <p><i>Work collectively to solve the issue of environment in a city like Karachi.</i></p> <p><i>Make sustainability a part of their everyday action. Demonstrate application of the knowledge through a community action project.</i></p>
2	<i>Communicating with Power, Passion, and Purpose</i>	<p>Ms Jennifer Johnson She is the Founder and Chief Innovation Officer at Institute of Skill Enrichment. She is an Educationist with more than a decade long experience in teaching English Language & Literature, Digital Innovation & Transformation, and Professional Development. She is the Head of IT and Digital Learning at Karachi Grammar School, Middle Section, in Pakistan. As a specialist in her field, she prioritizes holistic growth of individuals with her tailor-made curriculum.</p>	<p><i>Writing is the most sophisticated form of communication. In this course candidates will be able to express themselves meaningfully on paper and stage. They will partake in specifically designed activities that allow for self-expression to prosper with formality and articulation; they will engage in public speaking while thinking critically and creatively to produce remarkable writings.</i></p>

3	<p>Data Science and Health</p>	<p><i>This course will be taught by three facilitators.</i></p> <p>Dr Zahra Hoodbhoy MBBS, MEd, PhD (Public Health). She is an Assistant Professor in the Department of Paediatrics and Child Health at the Aga Khan University (AKU). A graduate of AKU and University of Cincinnati with nearly 15 years of experience in the field of public health with experience in implementing hospital and community-based projects in high and low middle income countries. Her research interests include use of technology and artificial intelligence to improve maternal and child health indicators in low resource settings.</p> <p>Dr Nida Saddaf Khan A data scientist having a Proven™ Professional Data Scientist Associate (EMCDSA) EMC certification and a Senior Instructor in the Faculty of the Health Data Science Center, CITRIC. She completed her PhD from the Institute of Business Administration (IBA) Karachi, and her thesis was on Artificial Intelligence (AI) and Machine Learning (ML) with wearable sensor technology in mental health. Her research involves various AI fields such as Deep Learning, Big Data, ML, Time Series Analysis, Social Network Analysis, Text Analytics, Sensor Data Analytics, and the Internet of Things.</p> <p>Dr Zarmeen Nasim A Senior Instructor in the Department of Medicine at AKU, she holds a Bachelor's degree in Software Engineering from NED University, a Master's degree in Computer Science from IBA, and a PhD in Computer Science from IBA. During her doctoral studies, she worked on several research projects that primarily focused on using natural language processing techniques for solving real-world problems. Her research interests include NLP, text analytics, data mining, social network analysis, and machine learning and data science.</p>	<p><i>Data Science is a rapidly advancing field that allows knowledge extraction from vast amounts of data using various scientific methods and algorithms. Like several other industries, data science is revolutionizing the healthcare industry. To keep up with these current trends, this course is designed to provide Pre-University students a sneak-peek into use-cases and hands-on application for data science in healthcare with special interest on low resource settings such as Pakistan.</i></p>
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4	<i>International Development</i>	<p><i>This course will be taught by two facilitators.</i></p> <p>Dr Shehla Zaidi A Professor in the Department of Community Health Sciences, affiliate Professor at AKU (International) in the United Kingdom, and the Institute of Global Health and Development. A graduate of AKU, Harvard and LSHTM, she holds more than 20 years of experience in international development, working with policy makers, practitioners, and communities to understand and unpack evidence to tackle complex challenges of governance, financing, power and politics that affect development framing and delivery.</p> <p>Dr Sana Hyat A medical doctor with a Master of Science in Public Health (MSPH). She is a Senior Instructor in the Department of Community Health Sciences at the Aga Khan University. She brings vast experience in the field of public health, both from the development sector and academia, with expertise in Health Systems. Her work involves engagement with public and private stakeholders for project management, monitoring and evaluation, programmatic training, and implementation of health service delivery in urban and rural settings.</p>	<p><i>Students are introduced to the concept of development and the critical social and economic underpinnings of development. We draw on literature from sociology, political science, economics, and anthropology, with a healthy blend of practical case studies and data from Pakistan. The course starts with unpacking what development means for a nation or community. Next, we explore what factors influence international development and result in disparities across countries. We discuss how the Sustainable Development Goals provide the metrics for tracking international development and examine sustainable development case studies from Pakistan. The course concludes with discussion of power and politics on shaping development priorities.</i></p>
5	<i>Discovering Learning to Think Mathematically</i>	<p><i>This course will be taught by two facilitators.</i></p> <p>Dr Munira Amirali A PhD mathematics, she is a Mathematics Education faculty and has almost three decades of experience of teaching mathematics at school and at university level.</p> <p>Mr Munir Tharwani A MPhil graduate from AKU-IED with a decade of experience of teaching mathematics at school and at the undergraduate level.</p>	<p><i>The course will enable you to revise a few basic mathematical concepts to strengthen your mathematical thinking, logical reasoning, and problem-solving skills. A variety of learning resources, such as manipulatives, realia, technology, games, mental math strategies and puzzles will provide you with an opportunity to immerse yourself in the world of mathematics and experience thinking mathematically.</i></p>

6	<i>Psychology of Everyday Life</i>	<p>Dr Nargis Asad A PhD in Clinical Psychology with professional experience of over 25 years. An Associate Professor and Chair, Department of Psychiatry at AKU. Dr Asad’s main areas of interest in clinical and research endeavors are adolescent and women mental health. She is actively involved in multidisciplinary educational and research activities with a focus on, socio-cultural factors in suicidal behavior in women & adolescents, gender, trauma, and resilience.</p>	<p><i>Most of us get intrigued by such questions as “Why am I anxious in new situations”? “How can my peers get better grades than me by studying less?” “Are extroverts happier than introverts”? This course in Psychology will help you understand human behavior and related mental processes and will provide you with a deeper understanding of how we think, feel and behave.</i></p>
7	<i>Healthcare Simulation in Action</i>	<p><i>There will be two facilitators for this course.</i></p> <p>Mr Ahmed Raza Khan Advisor, Simulation Administration, Centre for Innovation in Medical Education (CIME) – ACCA, MS Accounting and Financial Management (Australia), CSEP.</p> <p>Dr Selina Hasan Advisor, Simulation Education CIME – MBBS, MHPE (Netherlands), CSEP.</p>	<p><i>Experience a day in the life of an Emergency Responder and learn basic skills to save lives. See how a state-of-the-art Global Simulation Centre innovates clinical education to drive patient safety.</i></p> <p><i>The course will cover some basic first-aid steps, hands-on experience with different simulators.</i></p>
8	<i>Empowering the Self: Understanding Gender Dynamics in Society</i>	<p>Dr Anita Allana A Medical Doctor (MBBS), an MBA, and Masters of Bioethics (M.Beth, AKU). She is also Fellow of Higher Education Academy of UK (FHEA). A Faculty with Office at AKU linked with the Undergraduate Medical Education. She is also Senior Coordinator for Working Group for Women (WGW), Co-Chair of Bioethics Group, member of Bioethics Teaching Group and Women Faculty Forum at AKU. Dr Allana is an educator, researcher, and gender trainer with professional experience of over 25 years. Her educational and research interests are multidisciplinary including women empowerment, gender, and ethics.</p>	<p><i>Gender dynamics operate in every aspect of our personal and professional lives influencing our perceptions and behaviors. This course aims to provide inroads / opportunities to explore how gender norms, roles, and expectations shape gender identities, concepts of the self and social interactions.</i></p>

9	<i>Culture, Health, and Society</i>	<p><i>There will be two facilitators for this course.</i></p> <p>Ms Laila Akber Cassum A MSc Nursing, she is associated with the Aga Khan University School of Nursing and Midwifery since 1998. She has extensive clinical experience as a Critical Care Nurse and has held other clinical leadership responsibilities. Has been teaching advanced and critical care nursing courses at the undergraduate level and is involved in the teaching of a full-fledged course ‘Culture Health and Society’. Currently, she leads the Geriatric and Gerontology Clinical stream; works with government in the developing polices for the elderly in Pakistan. She is the author of multiple peer reviewed and indexed journals.</p> <p>Ms Zahra Tharani A MSc Nursing, she is associated with the School of Nursing and Midwifery. She is a trained professional in mental health, sexual health, and abuse. She is a grant recipient of the Martha Farrell Fellowship, 2021. She has been involved in the advocacy and creating awareness regarding community concerns, especially bullying, sexual health, human rights, mental health and masculinity role in violence and abuse in children. Her research interests are Adolescent Health Promotion, Mental Health Promotion and Illness Prevention, Nursing Education and Men Engagement for Social Innovations in Violence Prevention.</p>	<p><i>This course explores the field of socio-cultural anthropology. It enhances the student’s understanding of values, beliefs and practices of different societies and culture and its relationship to health and illness; behaviors in general and among specific groups living in societies. It provides an opportunity to analyze the relationship of culture, society and health care delivery system and promotes the exploration of trans-cultural concepts which can be integrated in the health care setting.</i></p>
10	<i>Leadership in Contemporary Times</i>	<p>Mr Danish Imtiaz Nazar Ali MBA, Institute of Business Administration with professional experience of over 14 years. Currently the Associate Director, Student Experience at Aga Khan University (AKU), he is a certified NLP Practitioner accredited by the American Board of Neuro-Linguistic Programming (ABNLP) and has been conducting various capacity development programmes on career development and life skills and has facilitated several educational and skill-based programmes.</p>	<p><i>An engaging course designed to develop new knowledge and concepts regarding leadership. The course will equip you with skills and strategies for engaging and unleashing knowledge, expertise, independence, and confidence in today’s competitive world. The programme uses highly effective classroom training delivered through multiple case studies and simulations using various media.</i></p>

11	A Pathway to Creativity!	<p>Ms Shumaila Khan She is a B-Arch; bachelor's in architecture from N.E.D University of Engineering & Technology. Has almost nine plus years of experience in planning, detailing, designing, and coordinating projects in commercial and residential settings (Architecture & interior both). A passionate event planner.</p>	<p><i>The programme will introduce you to different ways of looking at surroundings. Learning the art of listening is what is needed. How the smallest detail has a meaning or serve a purpose. To explore new ways of articulating your imagination and bringing them to physical form.</i></p>
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B. Choose a Language: Students have the option of choosing from:

1. Basics of the Arabic Language
2. Basics of the French Language

C: The Creative Arts Section: Students have the option of choosing one Creative Art from among the following:

1. Learn the art of Block Printing.
2. Learn or strengthen your aptitude for Painting and Drawing.
3. Learn the traditional art of Calligraphy.
4. Appreciating Classical Dancing.

D: The Science of Inquiry: Exploring the Fundamentals of Research

The Student Research Forum is an autonomous organization consisting of medical students, primarily focused on promoting quality research and integrating research opportunities for students between diverse educational specialties. This workshop aims to instill the importance of research and inculcate scientific thought among the participants. Students will be familiarized with the fundamental processes involved in conducting scientific research including developing a research question, writing a proposal and manuscript writing.

Facilitators: *Dr Asma Merchant, Dr Humza Thobani, Dr Nadia Ansari, Dr Zahra Hoodbhoy, Mr Usama Waqar.*

Programme Schedule

July 7 Friday	July 8 Saturday	July 9 Sunday	July 10-15 Monday to Saturday		July 16 Sunday
Hostel arrival & meeting with buddies	Orientation	Visit Interior Sindh	9:00 am - 1:00 pm	Attending chosen course	*Exhibiting students' achievements *Closing Ceremony *Departure
			1:00 - 2:00 pm	Lunch	
	2:00 - 3:00 pm		The Science of Inquiry: Exploring the Fundamentals of Research		
	3:30 - 5:30 pm		Language Orientation		
	6:00 - 7:30 pm		Creative Arts		
	Dinner				
Welcome Dinner	Visit to museums, *seeing Karachi with a different lens.		Free for assignments, sports, and swimming		

Fee Schedule

Particulars	For students in Pakistan	For students overseas
Application Fee	Rs 1,000	US\$ 20
Programme Fee Breakup <i>(Payable upon acceptance of offer)</i>		
Course Fee Includes field trips, course fee, course material, language orientation, and creative arts.	Rs 38,000	US\$ 400
Other Fees		
Health subscription *	Rs 5,000	US\$ 30
Security deposit **	Rs 5,000	US\$ 30
Hostel rent if applicable	Rs 15,000	US\$ 60
Notes		
<ol style="list-style-type: none"> 1. Students may buy their food at our cafeteria; estimate @ Rs 500 per day. 2. Selected students must pay for the course and other fees as applicable upon receiving an acceptance. 3. Fees are non-refundable. 4. Limited financial assistance is available. 5. Students not in Pakistan must make their own travel and visa arrangements; University will provide the required letters. 6. Transport arrangements to and from the University will be the responsibility of the student if they do not stay in the hostel. 7. Students travelling from overseas must have travel insurance. <p>* Mandatory and non-refundable. ** Refunded after the programme after deducting damages.</p>		