PAF-IAST
Skilling Pakistan

PAK-AUSTRIA FACHHOCHSCHULE:
INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY

NEWSLETTER
ISSUE: 2 October – December 2020

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Admissions Fall 2020

Education is not mere preparation for life; education is life itself. Prime Minister Imran Khan inaugurated the maiden PAF-IAST admissions at a ceremony held on 17th September 2020. The admissions for the Fall-2020 semester in 04 departments for 05 BS disciplines were announced in October 2020.PAF-IAST curriculum, heralding a unique concept in Pakistan, is designed on the guidelines of the Austria University of Fachhochschule. The selected students will have the opportunity to visit Austria and attend some courses there. PAF-IAST academic programs are duly recognized by the following bodies in Pakistan:

- Pakistan Engineering Council (PEC)
- National Computing Education Accreditation Council (NCEAC)
- Higher Education Commission (HEC)

Pioneering Departments

Initially, PAF-IAST has decided to induct students into its four departments for the following five BS disciplines:
- Electrical Engineering
- Chemical Engineering
- Biomedical Sciences
- Computer Science
- Software Engineering

Response from the student was overwhelming. After rigorous admission procedures, 174 students were selected against the offered programs.

Admission Summary Fall 2020				
S. No.	Name of Program	Enrolled Students	Highest Merit %	Lowest Merit %
1	Bachelor of Engineering in Electrical Engineering	39	91.11	73.30
2	Bachelor of Engineering in Chemical Engineering	31	95.70	70.77
3	Bachelor of Science in Software Engineering	37	92.52	72.78
4	Bachelor of Science in Computer Science	38	92.13	73.84
5	Bachelor of Science in Biomedical Sciences	29	95.56	83.34

Orientation: First Batch, 2020

PAF-IAST organized an orientation on 26 October 2020 for the new students in order to make their entry to PAF-IAST a memorable episode of their lives. Through this interactive event, the students were provided a platform to interact with the faculty for a better understanding of the institution, chosen programs, as well as associated facilities on the campus. Students were also apprised about the prospects of their chosen fields. The new entrants enjoyed the session and exuded hope and excitement for a good future ahead.

Technological Infrastructure: Academic Computing Services

Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Mang, Haripur has undertaken major initiatives towards development and deployment of technological infrastructure on its campus. The Academic Computing Services (ACS) at PAF-IAST has offers most advanced world-class technology to facilitate academic and research activities at the campus and beyond.

1. Smart Classrooms

PAF-IAST is the first-ever institute in Pakistan to deploy Smart Classroom solutions both in classrooms and lecture theatres. Currently, eight smart lecture theatres with most advanced

Interactive Digital Board, AI-enabled Speaker's tracking camera, lecture recorder, along with other ancillary equipment are operational. In addition, there are as many as twelve (12) Smart Classrooms transformed with Interactive Digital Board and Learning Management System (LMS) through Cloud AP.
The Campus is fully geared to change teaching from teacher-centric to student-centric classroom model—a radical departure from the prevailing teaching and learning culture in

the country. These smart classrooms ensure remote lecture delivery not only from both Austrian and Chinese universities/ institutes but also facilitate integration of interactive sessions of PAF-IAST's teaching faculty and researchers with their counterparts in the foreign universities/ institutes. The facility enables students to benefit effectively from the highly interactive classroom environment, with the facility of attending lectures and scholarly sessions from anywhere beyond the campus. The students also have access to recorded lectures to supplement their learning pursuits.

2   Blanket Wi-Fi Coverage

PAF-IAST offers blanket Wi-Fi coverage. With its 198 indoor Wi-Fi Access Points and eight outdoor Wi-Fi Access Points, Wi-Fi coverage is available to all students, teachers, researchers, allied staff, and even visitors. The institute enjoys singular distinction as the only campus in Pakistan equipped with the latest Wi-Fi 6 (5G enabled technology), thereby offering multi-gigabit connectivity across the campus with centralized management and portal services.

24/7 digital connectivity is the need of the hour to achieve the goal of "learning anytime anywhere". Thanks to this giant facility, PAF-IAST students face no issue in connecting for collaborative activities with their teachers and mentors. The multi-gigabit speed of ubiquitous wireless offers excellent speed when multiple devices are connected simultaneously for fast uploading/ downloading digital content, seamless video streaming, virtual desktop connectivity, etc. For this, PAF-IAST intends to provide each student on the campus from day one a laptop of latest specifications.

3.   Ultra-high-speed Core Network

The campus core network is based on a 40Gbps (upgradable to 100Gbps) fiber optic backbone. This makes PAF-IAST the unique higher education institution in Pakistan to have a backbone network of capacity for high-performance computing with low energy consumption.

The ultra-high-speed backbone network is capable of catering to all digital/ electronic communication needs of PAF-IAST. For the aggregation of digital traffic from fifty-four (54) Access Switches, there are five (5) redundant Distribution Switches which are deployed across the campus. Besides providing

access to the internet and digital resources to Wi-Fi Access Points, these Access Switches, transport surveillance video traffic to the centralized recorder and storage. The core network is equipped with f redundant Core Switches of 3.84Tbps throughput and 2800 Mpps forwarding performance, redundant Application Switches for connecting Compute Nodes, and redundant firewalls and routers of high throughput capacities.

4.   Cloud Data

PAF-IAST Modular Data Center for its Cloud services is equipped with most advanced products. This energy-efficient Cloud Data facility offers four IT racks and two other racks for in-row cooling and uninterrupted power supply within the setup. More importantly, t redundant firewalls of the data center provide secured communication and infrastructure through control of important and critical data. The entire panoply of Campus Computing Services comprising high-performance computing facilities and GPU-based Accelerated Computing (GAC) Cluster is geared to cater for 24/7/365 operations. The Cloud Data Center is capable of accommodating t more applications in the future for which the expandability capacity, twice of its existing capacity, is built in the current setup. The cloud-based services are available to   students and administration for maintaining   and managing   student repositories, digital learning content management for teachers, big data storage space for AI researchers, and other critical applications related to campus computing services and R&D.

5.   Campus Management and Student Information System (CM&SIS)

PAF-IAST has deployed Campus-on-Cloud solution for its requirements towards Campus Management System (CMS) and for maintaining Students Information System (SIS). The first batch of admissions, that is, Fall-2020 took place through Call for Admission, whereby prospective students were enabled to apply online for their preferred programs. Merit lists were generated automatically through the system. The solution comprises six major modules: i) Campus Structure & Policies; ii) Course Catalog & Class Scheduling; iii) Recruitments & Admissions; iv) Student Information, Registration & Academic History; v) Student Financial matters & Scholarships; and vi) Portals, Dashboards, Reports, & Integrations with third-party systems

Green and Clean Campus

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State-of-the-Art Academic Laboratories

An impressive array of teaching labs has been established in various departments. Some of them are as follows:

1. Augusta Ada Computing Lab

Augusta Ada Lab, which focuses on Software Engineering and Computing activities, provides facilities for courses such as Software Engineering, Programming Languages, and Compilation Techniques. With high-speed Internet (Ethernet and Wi-Fi Both), this custom-built lab houses Smart HiBoard, with Programming Display Units (PDUs), and Corei7/i5 All-in-One networked Desktop Computers using Windows as well as Linux operating systems.

2. Physics Laboratory

Physics Laboratory trains science and engineering students in classical physics and electromagnetism. Demonstration kits are used to illustrate physics principles and enable students to relate theoretical knowledge with practical learning.

3. Electronics & Circuits Laboratory

Equipped with modern instruments, the laboratory provides hands-on training to engineering students in all courses dealing with electric and electronic circuits. This state-of-the-art facility helps students to see beyond the theory and serves as a foundation for the students to grasp the subjects to be taught during advanced semesters.

4. Computer Laboratory

This lab is equipped with modern high-performance computers and wireless/wired connectivity. It is meant to conduct Lab courses of computing and circuits and system-level simulations, training, workshops, and software competitions.

5. Fluid Mechanics Laboratory

In this exclusive lab, fluids and their flow behaviors are studied and observed. Pressure variations are calculated through gauges for compressible fluids as they flow through convergent-divergent nozzles. Various theoretical demonstrations of different laws of fluid mechanics are checked through lab equipment.

6. DLD & Embedded Systems Laboratory

This lab covers Digital Logic and Digital Systems Design, Embedded Systems, and IoTs. The experiments range from basic digital concepts to advanced digital systems. The lab is equipped with FPGA, Adruino, and Raspberry Pi kits.

7.   Workshop Laboratory

This Lab has been designed to teach students basic manufacturing processes, mechanical tools and equipment, electrical home wiring, and installation and measurement along with imparting hands-on training. Students can work out the labor involved, as well as time, and cost of the product or work.

8.   Chemical Process Technology/Analytical and Physical Chemistry

Chemical process technology lab provides hands-on experience for semi-industrial/industrial equipment. It is equipped to teach plant and process design, scale-up, etc. Students can utilize several different scientific subjects in one assignment, for instance, analytical chemistry, thermodynamics, heat and mass balances, unit operations, kinetics, process control, uncertainty calculations, sampling techniques, safety, and environmental aspects.

9.   Heat Transfer Laboratory

At chemical industries, various operations are assisted with addition and rejection of heat by using a variety of heat exchangers and reactors whose performance is highly affected through heat transfer.   -The heat transfer lab is designed to familiarize students with various modes of heat transfer by applying its fundamentals with the help of available equipment.

10. Organic & Inorganic Chemistry Laboratory/ Environmental Engineering

At this Lab, students become conversant with basic instrumentation, techniques, and apparatus and can master latest techniques such as spectroscopy, chromatography, organic chemical reactions, salt analysis, elemental analysis, and catalysis. The analytical and physical chemistry lab initiates students in physical and analytical chemistry techniques. The application of principles learned in class is reinforced through various experiments. Students are amply exposed to analytical and other techniques used in chemistry and chemical engineering.

11.   Thermodynamics Laboratory

The thermodynamics lab equipment is related to basic laws and applications of thermodynamics like boiler, refrigeration unit, Joule-Thomson apparatus, and Boyle`s law apparatus. Not only does this Lab enables students to have thorough understanding of these principles but it also serves the basic requirement of a chemical engineer, i.e., to cope with the wide variety of problems such as calculation of heat and work requirement of physical and chemical processes.

Laboratories are abuzz with Student Activity

PAF-IAST Signs Various MOUs/MOAs

with Domestic as well as International Educational Institutes and Industries:

1. Memorandum of Agreement (MOA) Between Jiangsu University (JSU) and PAF-IAST

Memorandum of Agreement (MOA) between Jiangsu University (JSU) and PAF-IAST was signed on 25th August 2020 for establishing a center of excellence in "Agriculture Food Technologies", exploration of collaborative research projects and exchange of teaching, research staff & students.

2. Memorandum of Agreement (MOA) Between Beijing Jiaotong University (BJTU) and PAF-IAST

A bilateral agreement was signed between Beijing Jiaotong University and PAF-IAST on 9th October 2020 to establish the center of excellence in "Railways Engineering", exploration of collaborative research projects & Exchange of teaching, research staff and students.

3. MOU Between National Radio and Telecommunication Corporation, Haripur and PAF-IAST

An MOU was signed with National Radio and Telecommunication Corporation, Haripur (KPK), Pakistan on 15th October 2020. Both the parties shall work on join research and consultancy projects. NRTC has also agreed on placement (internship and jobs) for PAF-IAST students on merit basis. NRTC shall extend all possible support to faculty regarding industrial visits and networking.

4. Pakistan Telecommunication Company Limited (PTCL)

Pakistan Telecommunication Company Limited (PTCL) was awarded a turnkey ICT contract on 23rd October 2020 to deploy state-of-the-art IT infrastructure for Pak-Austria Fachhochschule Institute of Applied Sciences and Technology (PAF-IAST) University. Zarrar Hasham Khan, Chief Business Services Officer, PTCL and Dr. Nasir Khan, Rector, PAF-IAST signed the contract at the university campus in Haripur. The signing ceremony was attended by Suleman Awan, General Manager, Digital Services, PTCL, Dr. Mohammad Mujahid, Advisor, PAF-IAST, Wasim Hashmi, Advisor PAF-IAST, along with other senior officials from both sides. Anwar Amjad, Advisor IT, PAF-IAST explained the significance of this project and briefed about future plans of the university with regard to IT & communication facilities.

5. Zalmi Foundation

PAF-IAST is joining hands with Zalmi Foundation to further strengthen academia-industrial linkages. An MOU was signed in this context on 23rd November 2020. This MOU is an important initiative to trigger interplay between the industry and academia.

PAF-IAST EXPANDING IT'S HORIZON:

Visit of Prof. Dr. Muhammad Suleman Tahir, VC Khawaja Fareed University of Engineering, and Innovation Technology

Prof. Dr. Muhammad Suleman Tahir, Vice Chancellor KFUEIT, Rahimyar Khan visited PAF-IAST on 27th November 2020. The visiting dignitary praised the highly technical educational infrastructure of PAF-IAST. He commended state-of-the-art academic facilities at Pak-Austria Fachhochschule as well as the plans to make use of the broad-based technical facility for KFUEIT students.

Visit to Mashmoom Industry Hattar

PAF-IAST Senior Management and faculty members visited Mashmoom Industry, Hattar on 2nd December 2020 as a part of Academia - Industry Collaboration.

Seminar on COVID-19

To raise awareness on COVID-19. PAF-IAST organized a series of seminar with the theme 'How to protect yourself and others from COVID-19'. The purpose of these seminars was to sensitize the students, faculty, and staff about the need to take precautions against the pandemic of COVID-19. During these seminars' COVID-19 SOPs were strictly followed.

Seminar on Character Education and Academic Achievements

Character education is the process of cultivating common attitudes, beliefs and behaviors that are important for people to conduct themselves as responsible citizens besides helping students with their academic subjects. Well-groomed character is also helpful for students to interact properly with their teachers as well as fellow students and turning their classroom into a better learning environment. Fully alive to this need, PAF-IAST organized a series of seminars on Character Education and Academic Achievements. The seminar was conducted by Mr. Muhammad Ishfaq Khattak for all undergraduate programs,

Webinar on Importance of Good Hygiene for a Healthy Life

The main objective of this seminar was to promote good personal and environmental hygiene practices at PAF-IAST and encourage students and staff members to adopt and observe those good hygiene practices which are imperative to t prevent diseases, reduce disease transmission, and promote good health in general. Moreover, good hygiene creates a nice image of an individual in the society. Practicing good personal hygiene can minimize

the risk of many mental, social, and health problems. In summary, good personal hygiene habits are directly related to fewer illnesses, good personality, and better health. Equally important is to be mindful of l about the cleanliness of the surroundings in which a person lives, Protection of environment is critically important not only for ourselves but also for the generations to come.

Iqbal Day at IT&CS Department

Iqbal Day was organized by the students of IT & Computer Science department. The event spotlighted Iqbal's teachings and commemorate his contribution towards eventual creation of a separate homeland for the Muslims of the subcontinent. He was the man who conceived the idea of a separate country where Muslims could live peacefully,
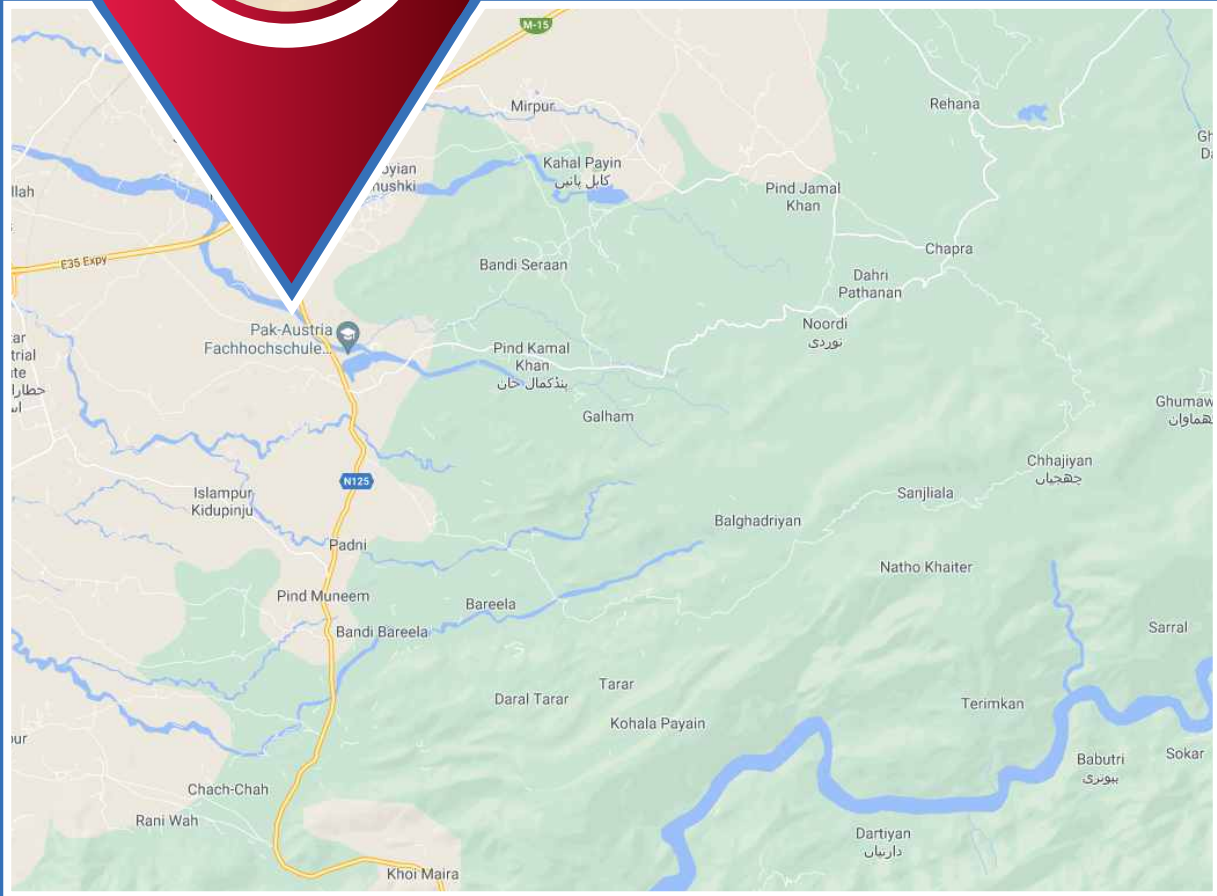

prosper, and follow their religion in total freedom. Dean FECID was invited as the chief guest. The event was attended by the honorable Rector and all the Directors of PAF-IAST.

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