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# SERVICE BEAUTY

Let us make this space resound with these beautiful and sublime

# RESPECT

Habib University is built on the founding philosophy of YOHSIN- a motto that we strive to live and work by.



Your worth as a person is measured not by your technical knowledge but by your interaction with nature and society at large. You will self reflect. Here you will gain an indigenous liberal arts education that has, at its heart, the philosophy of YOHSIN.

### words: husn (grace), ehsaan (generous), ehsan (excellent) – yohsin

Dr. Nauman Naqvi, Dean, School of Arts, Humanities and Social Sciences

# PASSION EXCELLENCE





STATE OF BELLEVILLE

a **Liberal Core**, nuanced programs and state of the art campus; Habib University provides **World Class** education in Pakistan's largest and most **diverse City**, Karachi.





## AUDITORIUMS

With its slick and modern design, the Habib University auditorium comfortably seats 300 people. It is equipped with the latest technology and multimedia, enabling visual presentation on the wall with options for wide video display screens. Spanning from the first floor to the third floor with fixed tiered seating arrangement and an advanced sound and lighting system, the auditorium serves as a platform to host high profile conferences, symposiums, academic, business and multi-cultural functions.



### HIGH QUALITY LABORATORIES

Habib University has 14 state-of-the-art teaching labs as epicenters of scholarly research in Pakistan. The labs are designed in consultation with Research Facility Design who have also designed labs for Massachusetts Institute of Technology (MIT).





## LIBRARY

The Library is the center of all intellectual activities. As a semi-public space, it creates an impact, not only on the lives of the students, but also the larger community. It houses an estimated collection of more than 100,000 books, plus access to thousands of online publications and digital resources that are available to the entire university community as well as the public.





At Habib University, learning happens face to face. The dissemination and sharing of knowledge comes through personal exchanges- whether it be grappling with an issue in Philosophy 101, investigating a hypothesis in the physics lab, or just having a conversation over a cup of chai. At HU you will find that such interactions happen at every turn, with your peers and with your professors. With a low-student faculty ratio of 12:1, and small classes, learning through personal conversations is built right into the campus culture.





# MAJORS

SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES BA Honours in Communication Studies & Design BSc Honours in Social Development & Policy

SCHOOL OF SCIENCE & ENGINEERING BS in Electrical Engineering BS Computer Science Habib University's pedagogical experience ensures that all stuents get ample face time with faculty. Our student-faculty ratio is the best in the country





## THE LIBERAL CORE

The Core commences with the systematic development of reading, communication, and presentation skills that will continue to be improved throughout our students' undergraduate careers. The curriculum is built around a recurring multidisciplinary engagement with the history, structures, and features of the modern period and world, drawing on powerful texts and artifacts in a range of media from across the arts, humanities and social sciences. From colonialism to nationalism and the nation-state, from war to the global political economy, from the growth of modern media to science and technology in their relationship to society, our Liberal Core is committed to a rigorous analysis and critique of modernity in all its local, regional, and global complexity. An encompassing historical understanding is essential to the classic liberal education - one that our core curriculum provides with a critical, modern edge.

A set of six courses, a reading, speaking, and writing program spread out over three years, that we will all share amongst us. The liberal core is essential to who we are, and it will be essential to who we become.

At the most general level, it is structured around three essentials: language, time and the world. Language and time – there is no thoughtfulness without language – for it is the medium in which we think and communicate – the medium in which we understand and relate; and there is no thoughtfulness without thoughtfulness about one's time and one's world. Language is essential – essential to knowledge, essential to relation, essential to truth. This is why we begin the liberal core with Rhetoric & Communication.

Habib University's core requirements are designed to instill in our students an appreciation of their own context and cultures of thought, a grounded sense of their own self-worth and potential, and to do so in a spirit of global relation and expansive universality.



"Habib University's interdisciplinary education is inspiring. The liberal core is the main reason I applied here. I want to train to become an engineer but would love to dabble in history and philosophy courses. At Habib, I know that is possible."

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HASNAIN RAZA Class of 2018

# COURSE SNAPSHOTS

#### CORE 101: Rhetoric & Communication

The command of language and the ability to communicate effectively in speech and writing is essential to leadership. This is why eloquence in the broadest sense is one of the most highly valued benefits of a liberal arts education. The opening course in our Liberal Core is designed to develop the reading and presentation skills - written, oral, applicative and visual - that our students will need to excel at Habib University and beyond. Our curriculum nurtures our students' rhetorical abilities throughout their college career, especially through the Liberal Core. Rhetoric & Communication is designed to first identify the different aspects of expression and eloquence as distinct and essential abilities, and to develop and improve them through application and practice.

Explaining the combination of powers involved in the ancient division of rhetoric into invention, arrangement, style, memory, and delivery, the Roman orator Cicero says in his classic text on rhetoric, De Oratore: "Since all the activity and ability of an orator falls into five divisions, he must first hit upon what to say; then manage and marshal his discoveries, not merely in orderly fashion, but with a discriminating eye for the

exact weight as it were of each argument; next go on to array them in the adornments of style; after that keep them guarded in his memory; and in the end deliver them with effect and charm." The material, classroom experience, and exercises of **Rhetoric & Communication** are designed to cultivate all five of these critical abilities, together with sophisticated reading skills. Our students will learn to make their speech and writing a total rhetorical experience, allowing them to communicate as effectively as they can across a variety of media. Class content will focus on compelling and relevant texts broadly defined - essays, journalism, speeches, advertisements, websites, etc. - and chosen to elicit opinion and encourage discussion and debate. As they develop their powers of reading powerful texts, students will practice and improve communication skills through regular writing assignments, revision exercises, individual and group presentations, and the utilization of 'alternative' (non-traditional) communication media like websites and social media. Rhetoric & Communication will also feature the ethics of discourse and communication, so that tact and respect for the other become an essential part of students' experience and understanding of rhetorical ability.

#### CORE 201: Pakistan & Modern South Asia

For the first time in history, nation-states - including that of Pakistan - emerged in the region of South Asia in the middle of the 20th century. How did such a world-historical event come about? What has it meant for the peoples of this region? In short, what is the history of our present? This question takes on a particular urgency in Pakistan as the region passes through the current period of crisis and change. With a special focus on the emergence and trajectory of Indo-Muslim nationalism and the creation of Pakistan, this course will be a conspectus of the modern history of South Asia from the colonial period, including the rise of anti-colonial nationalism and decolonization, to the Cold War and the contemporary period of turmoil and transformation. While focusing on the history of Pakistan's challenging present, students will also learn about the larger, regional and global context in which that history has unfolded. Apart from the main outlines of the history of modern South Asia, students will also learn to place the region's colonial modernity within the larger framework of modern history. Students will crucially learn to identify major features of the colonial economy and state, under which – especially after the Great Rebellion of 1857 regional religious and other

social reform movements emerged, nationalisms formed, and the dramatic transformation of regional traditions took place, processes that continue into the present. They will learn to see contemporary conflicts and ideologies as specific to the modern period rather than as natural cultural expressions, and will begin to see regional cultures and societies themselves as historical entities. Course materials will again be multidisciplinary – including, e.g., anthropology, literature and film – but will be primarily historical. This course will combine lectures and seminars, and will be writing intensive.

#### URDU 101: Jehan-e-Urdu (The World of Urdu)

This course is required for all Habib students. It is designed to fulfill our commitment to the vernacular, as well as to reap the potential of modern Urdu literature and criticism to illuminate crucial aspects of our modernity. Jehan-e-Urdu is a pedagogically dynamic seminar that will rapidly advance students' appreciation and knowledge of Urdu through engagement with powerful texts of prose and poetry selected to speak to the concerns of the student today, opening up Urdu as a living world of insight and thought.

## SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES

Habib University's School of Arts, Humanities, and Social Sciences (AHSS) will set a new international standard for interdisciplinary, liberal arts education. The School's growing, international faculty will engage students in collaborative research from their freshman year, encouraging students to hone their ability to think analytically and to creatively respond to challenges.

A striking feature of the School is that it locates itself at the intersection of formal, theoretical learning and real-world problem-solving. Students graduating from the School will engage in intensive, project-based learning, mandatory internships, and a senior capstone project that will foster independent and creative thought and develop the skills necessary to effectively communicate pioneering ideas. The School will produce innovators and leaders in the increasingly important fields of development and communications and media.

The School of Arts, Humanities, and Social Sciences is offering the following degrees to the entering class of 2014:

BSc (Honours) Social Development & Policy BA (Honours) Communication Studies & Design



School of Arts, Humanities & Social Sciences



## BA (HONOURS) COMMUNICATION STUDIES AND DESIGN School of Arts, Humanities & Social Sciences

### What is Communication Studies & Design?

Communication is the central operation by which society produces and reproduces itself. Communication Studies is dedicated to the nature and dynamics of this process. Developed on the basis of market research, as well as in consultation with academics from leading regional and global universities, the CSD curriculum provides inter- and transdisciplinary instruction not only in the function but also in the practical application of a wide range of communication and media forms.

#### Vision

We believe that one has to make media in order to understand media. This is why the CSD curriculum combines theory and practice, thinking and making. Drawing from both the origins of the discipline as well as its later developments, Habib University offers a program that integrates the practical and the theoretical, the social sciences and the humanities.

#### What will students get from studying Communication Studies & Design?

Students in Pakistan today represent a generation with an unprecedented potential to meet the challenges of the modern world. The unique combination of communication theory with practice helps unfold this potential. CSD students will develop an awareness of different types of media and learn to produce artifacts of communication ranging from the text-based to the graphic to the visual. Therefore CSD graduates are prepared for careers in the media industries as well as in media management and public policy. Skills of critical thinking, systematic analysis, and clear and articulate communication - consistently developed and refined in all forms in CSD will prove crucially advantageous on any market.



#### STRUCTURE

The CSD program consists of three streams – Communication Studies (Com), Communication Design (ComD), and Moving-Image Media Production (Mov).

#### **Communication Studies (Com)**

The Com stream builds upon the core academic CSD curriculum that provides the historical and theoretical grounding for the department as a whole. It offers students the opportunity to explore the complex relationship between communication, media, and society. We analyze form and function of mass media communication as well as new media forms, from digital platforms like Google or Facebook to multimedia storytelling. The Com student will also enjoy the opportunity to produce – in the forms of websites, podcasts, videos, and digital archives – public documents representing the fruits of their research and discovery.

#### Communication Design (ComD)

The ComD stream offers students the opportunity to explore the visual combinations of words and images in traditional and new media. The skills learned will enable students to visualize ideas, organize information effectively and aesthetically, and circulate that information to the intended audience. Gaining skills in typography, photography, and illustration, students will actively investigate the range of methods of visual production. Graduates will be prepared with an active understanding of graphic identity, publication and interaction design, and environmental and information design. ComD's emphasis on communication in local and regional contexts enables students to become graphic problem-solvers, sensitive to their environment and to its location within global society.

#### Moving-Image Media Production (Mov)

The Mov stream will give students the opportunity to explore the making of moving-image media in a variety of forms. Grounded in a knowledge of cinema and media history and theory, students will have the opportunity to explore fictional and documentary filmmaking, experimental video, and journalistic visual reporting and storytelling. With hands-on experience in the scriptwriting, filming, editing, and exhibiting of their own original work, students gain a broad, working understanding of digital film and television production.

The program integrates perspectives and skills drawn from a wide range of areas including:

- Communication Theory
- Media Studies
- Television Production
- Cinema
- Journalism
- Graphic Design
- Literary Criticism
- Sociology
- Aesthetics
- History



"DESIGN CAN BE ART. DESIGN CAN BE AESTHETICS. DESIGN IS SO SIMPLE, THAT'S WHY IT IS SO COMPLICATED."

PAUL RAND

# COURSE SNAPSHOTS

#### CSD 100 Introduction to Media Studies

This course provides an introduction to the trivium of Media Studies: Media Analysis, Media History and Media Theory. We systematically examine different analytical methods and apply them to essays, photos, films, websites or Facebook profiles; we look at how the invention of technologies like the printing press and the computer changed society; and we finally ask how Media Theory tries to explain the very nature of media, taking new forms like Media Anthropology, Media Law and Media Philosophy into account. The course also includes the mediation of basic practical skills like public speaking, writing, filming, editing, and setting up a website.

#### CSD 102 Design Studio 1

This studio course is the gateway course for students choosing to pursue the Design stream. It is a prerequisite for further Design courses, and is required of all CSD majors. The course introduces the students to the basic skills for effective visual communication by learning from the natural and built environment. They will engage in traditional as well as digital media to investigate the fundamentals of form such as line, texture and colour through hands-on-assignment and critiques.

CSD 104 Guerrilla Filmmaking This studio course is the gateway course for students choosing to pursue the Moving-Image Media Production stream. It is a total immersion course in filmmaking from concept to delivery, and will be required of all CSD majors. The emphasis is on guerrilla filmmaking with a hands-on approach to teaching. Students will be required to write a script for a short film of their choice, taught the use of digital cameras and sent out to shoot their project. The footage they bring back will be analyzed by the teacher and the class together and then edited into a coherent piece.

#### CSD 110 A Brief History of Communication

This course will introduce students to the key concepts of communication by using the narrative of system differentiation. We start with families, villages and tribes to examine early communication forms like earth and ancestor cults; then explore the formation of large territorial empires and the spread of cross-border communication that leads to forms of religious reflection on identity and distinctness; watch the first forms of bureaucracy emerge; proceed to the representation of society as a hierarchy in stratification to finally examine the difficult terrain of the so-called modern world.

#### SAMPLE CSD ELECTIVES

Design for Social Innovation This course will involve a collaborative student group project with an emphasis on contextual research and community-engaged practice. Coursework will instruct the role of design as a catalyst in bringing about positive behavioral change within society. Students will identify social issues faced by a particular locale and find a design solution in collaboration with the community. The design project may take the form of editorial design, information and environmental graphics. As a result of its involvement, the community will have ownership of the solution and contribute towards its post-completion. An important feature of this real-world project will be the forging of valuable partnerships with community-based organizations.

#### Multimedia storytelling

The combination of the diversity of media forms presented on websites has enormous potential that has not yet been fully realized. This course introduces students to the art of multimedia storytelling and its main requirements: complementary information, nonlinearity, and field reporting. It enables students to fuse text, still photographs, video clips, audio, graphics, and interactive elements to create an informative, emotional and aesthetically convincing experience.

#### Music Video

Music video is one of the most accessible ways to begin a career in directing. Many innovative and established feature directors such as Spike Jonze, Michel Gondry or David Fincher have used the medium as a launching pad for successful filmmaking. The reason is obvious: By its very nature, the medium is free of many of the constraints of standard narrative filmmaking and gives room for experimentation. In this course, each student will learn the basic elements from treatment to post-production to realize their own music video, be it for an up-and-coming Pakistani band or for an already published song.

## BSC (HONOURS) SOCIAL DEVELOPMENT AND POLICY School of Arts, Humanities & Social Sciences

**Development** has become a principal idea of our times, and an object of aspiration for individuals, communities, and governments alike. How can we examine and engage with development as a multi-faceted process of social, economic, and political transformation, while attending to context and ethical practice? Responding to this key concern, the central vision of the Social Development and Policy (SDP) program at Habib University is to nurture a comprehensive understanding of development and social change - one that is firmly rooted in an ethic of care as well as a grounded sense of place. Social Development and Policy combines a rigorous classroom training in the social sciences and humanities with reflective, field-based practice. The first program of its kind in Pakistan, it aims to give students new ways to approach the challenges of development at home and abroad. Students will explore how major development concerns such as poverty, inequality, urbanization and human rights are shaped by historical forces and processes of political power, while also examining the role

of states, development institutions, markets, and civil society in shaping human well-being. Employing a multi-disciplinary approach to the study of social problems, the program integrates perspectives and skills drawn from a wide range of disciplines, including:

- Anthropology
- History
- Economics
- Sociology
- Political Sciences
- Religious Studies
- Philosophy
- Literature
- Environmental Studies

Offering critical insights into the core values of development and progress, the major will train a new generation of social scientists who can incorporate lived experience and local sensibilities into policy design at the national and international levels - as has been true of the best development practice.





"I want to be involved in community work and grass-root development programs that will provide me with a comprehensive view of the social fabric in Pakistan. The SDP program aligns perfectly with my interests."

Neha Panjwani Class of 2018

# COURSE SNAPSHOTS

#### SDP/CSD 103: Urban Experience

This introductory course in immersive learning is designed to open up students to the context in which they live, research, and work. Through exercises in individual and group-led observation, students will be encouraged to reflect on the diversity of places and communities that surround them, and become both curious and comfortable about dialoguing with them. The course will cater to the necessity for new undergraduates to obtain an in-depth understanding of the built and lived landscape, in the rapidly changing urban and rural-scapes of Pakistan. It will involve field trips to designated areas of Karachi and its surrounding countryside, complemented by theoretical and methodological discussions pertaining to the dynamics of urbanization, field research, and Karachi.

#### SDP 118: Reading Marx with Dickens

This course will focus on the historical epoch — the industrial revolution — that shaped the writings of Karl Marx and Charles Dickens. Where Marx uses the ideas of class consciousness, exploitation, and social injustice to rally the working class, Dickens' novels quite movingly depict the subjective experiences of working individuals - particularly children and young adults. Students will read a selection of Marx's writing together with Hard Times, Great Expectations, and A Tale of Two Cities, exploring how social theory and literature can reinforce each other in illuminating processes of historical change.

#### SDP 111: History of Economic Thought

This course explores the evolution of key ideas within economic thought and analyzes how these ideas led to different ways of theorizing in economics. We will begin by examining the theories and methodologies presented by two of the greatest thinkers in classical political economy: Adam Smith and David Ricardo. This will be aided by understanding the influence of rational subjectivism and utilitarianism on economic thought. The final part of the course will examine the critique of political economy offered by Karl Marx. The course will rely on textbook readings and notes prepared by the instructor.

#### SDP 112: Catastrophe and Culture

How do people, communities, and cultures respond to calamities? Do disasters represent key moments in the development of societies? This course will explore the effects of catastrophic events on human thought and activity and interrogate how societies use art, politics, religion and technology to depict, recall, understand, narrate, predict, cope with, mitigate, prevent, or even contribute to the impact of disasters.





# SCHOOL OF SCIENCE AND ENGINEERING

The School of Science and Engineering (SSE) aims to have a profound impact on the society and economy of Pakistan. It shall be a center of excellence in science and engineering education and research. Through innovation and leadership, its graduates shall establish and propagate a technology driven culture and lead technological advancement in Pakistan.

The School will offer an innovative approach to scientific learning, balancing both the theoretical and practical aspects and combining a rigorous science and engineering education with liberal arts. It will supplement traditional classroom methodologies by community-based and project-based learning.

Starting in year 2014, the school will offer the following undergraduate degree programs:

BS Electrical Engineering BS Computer Science





### BSIN ELECTRICAL ENGINEERING School of Science & Engineering

Habib University's Electrical Engineering program is designed to impart rigorous technical knowledge, combined with hands-on experiential learning and a significant exposure to arts, humanities and social sciences in order to develop students into well-rounded professionals. Thus, the program will prepare graduates for achieving excellence in their profession while being cognizant of the social and environmental implications of their work. The curriculum provides comprehensive knowledge in mathematics and basic sciences, computation, electronics, electrical power systems, electromagnetics, telecommunication systems, automation and control systems. There is a strong focus on undergraduate research. Students will have the opportunity to specialize in Power Systems, Telecommunications, or Electronics.

The program is right for those who

like to study Mathematics and Physics and are curious about how electrical and electronic systems work
are eager to become a critically conscious and environmentally responsible Engineer of the 21st century

- are ready to help solve Pakistan's current energy crisis
- are fascinated by the sheer power of electrical energy for sustaining the economy

are interested to be a part of designing and building the next generation of mobile communication networks
want to learn more about embedded systems that are at the heart of many of our home appliances

**Program Objectives** 

• To provide a sound knowledge of advanced level mathematics, natural sciences, computing and engineering, which are essential to analyze and design complex software and systems, combined with a broad liberal arts education

- To provide hands-on experience essential for sciences and engineering practices
- To provide sufficient breadth and depth through interdisciplinary, as well as discipline-specific, specialized education
- To create an awareness of legal responsibilities, civic duties and contemporary issues and an understanding of economic, social, environmental, professional, ethical and health & safety issues
- To ensure that the engineering graduates have the ability to communicate well and are able to work in multidisciplinary teams as members and leaders





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# PROGRAM Specializations

In the last three semesters of the program, students are offered elective courses. These courses are grouped into three specializations and in order to specialize in an area, a student chooses most of the electives from that area. These specialization areas are determined by current and future trends in the local and global industry.

#### **Power Systems**

The ready availability of electrical power at a reasonable price is essential for the economic development of a country. In order to come out of the current energy crisis Pakistan need to launch more power generation projects, upgrade its transmission network and modernize the distribution system in order to reduce distribution losses. All this will be done by electrical engineers who specialize in power systems. Proposed Courses:

- Power Systems Analysis
- Power Electronics
- Renewable Energy Systems
- Electrical Machines
- Power System Economics
- Smart Grid

#### Telecommunications

Telecommunication systems play an increasingly important role in our daily lives. A good telecommunications infrastructure is essential for the economic development of a country. With the introduction of 3G and 4G cellular phone system in the near future and the proliferation of data networks, Pakistan will need more telecommunication engineers to design, build and maintain these systems.

Proposed Courses:

- Computer Networks
- Digital Communication
- Antenna Theory & Design
- RF and Microwave
  - Engineering
  - Wireless Communication
    - Mobile Communication: 4G and beyond

#### Electronics

Modern electronics is everywhere around us in the form of audio amplifiers in entertainment systems and televisions as well as electronic chips in computing and communication devices. The percentage of electronics in seemingly purely mechanical systems, such as automobiles, has steadily increased to more than 20% and is expected to increase further. With the increasing role of electronics in all areas of human activity well-trained electronic engineers are expected to be in increasing demand.

- Proposed Courses:
- Digital Electronics
- Industrial Electronics
- Power Electronics
- Robotics & Mechatronics
- Measurement &
- Instrumentation
- Embedded Systems

# EE LABS

#### **Applying Theory to Practice**

Habib University is equipped with state of the art laboratories (labs) allowing students to connect theory with practice, build customized team projects and equip themselves with practical knowledge.

#### **Circuits & Electronics Lab**

This lab will be used to support courses such as 'Electric Circuit Theory' and 'Introduction to Electronics', in addition to more advanced Electronics courses. It will provide students with their first exposure to practical Electrical Engineering. Each workbench will have basic measurement instruments like a power supply, function generator, oscilloscope, multimeter and breadboard. Students will study the properties of electrical components and networks, network theorems and simple electronic circuits like amplifiers, etc.

#### Digital Systems and Instrumentation Lab

The courses served by this lab include 'Digital Logic Design', 'Computer Architecture' and 'Design, Microcontrollers & Interfacing', etc. Students will study and build the basic building blocks of a modern digital circuit like logic gates, adders, flip-flops, counters and shift registers. Students will study the design of modern computers and learn to build hardware and software for automating various tasks using microcontrollers.

#### **Communication Lab**

This lab will support 'Signals and Systems', 'Communication Systems' and more advanced Communications and Signal Processing courses. This lab will house equipment to enable students to study the basic properties of analog and digital signals and systems, various techniques of transmitting data, voice and video over wire, fiber and wireless media. The students will also study modern communication systems such as cellular phone systems, microwave communication systems, etc.

#### **Power Systems Lab**

This lab is designed to teach Basic Electrical Engineering, Control Systems and more advanced Power and Control courses Students will conduct experiments to study various methods of generating electrical power, transmitting it over long distances and then distributing it to individual customers. Students will also study AC and DC motors and generators. This lab will also house equipment for the study of feedback control systems and their properties. Students will use frequency-domain and time-domain techniques to design controllers for the speed control of DC motors, balancing an inverted pendulum, etc.

#### **Student Projects Lab**

This lab will be available to students to design, test and fabricate their course and final year capstone projects. Each workbench will have basic test and measurement instruments. In addition, soldering stations and a facility for printed circuit board design and fabrication will also be provided. This lab will also house basic mechanical equipment for cutting, drilling, shaping and turning various materials used in students' projects.

#### Energy Lab

This lab is designed to introduce the applications of physics and chemistry in the domain of renewable energy. Via usage of chemical tools along with specialized energy kits, the students will be introduced to the creation and functioning of experimental setups including solar cells, wind mills, solar thermal, hydrogen fuel cells, wind / solar to hydrogen, bio fuels etc.

#### **Engineering Workshop**

This laboratory based class provides an introduction to several essential facets of engineering education. It is comprised of concurrent streams, each building specific skills and reinforcing them through their interplay. Developing confidence and introducing decision making are important goals of this class.

- Tactile familiarity and competence is acquired through designing and constructing circuits and printed circuit boards.
- Programming and calculations using Matlab<sup>™</sup>.
- Interfacing and control using LabView<sup>™</sup>.
- Oral and written presentations build communication skills.

Project based learning, self-learning and teamwork are developed through a variety of immersive exercises

# COURSE SNAPSHOTS

#### EE 111. Electric Circuit Analysis

Introductions to circuit elements, circuit laws, network reduction, node and mesh analysis; energy storage elements; transient and sinusoidal steady state analysis; AC energy systems; magnetically coupled circuits, the ideal transformer; polyphase circuits; computer applications in circuit analysis.

#### EE 171. Digital Logic and Design

Introduction to the design of digital hardware, realization of computation with logic gates; Boolean algebra, design of combinational logic circuits and analysis and design of clocked sequential logic circuits, circuits for arithmetic operations; introduction to hardware description language and its application to logic design.

#### ENGR 191. Engineering Workshop I

Matlab, LabView, SolidWorks and Proteus softwares; familiarization with electrical symbols and basic laboratory equipment; soldering, de-soldering and drilling; schematic and PCB designing and hand fabrication; cutting, finishing, assembling and drilling of metal and acrylic sheet; making internal and external threads using taps and dies; introduction to home wiring.

#### ENGR 192. Engineering Workshop II

Continuation of Engineering Workshop I; Matlab, LabView, SolidWorks and Proteus software; cutting, finishing, assembling and drilling of metal and acrylic sheet; building a small electrical system such as a power supply.

#### EE 211 Introduction to Electronics

Topics include Device physics, PN junction diodes, bipolar junction transistors (BJTs), FETs and MOSFETS and their terminal characteristics; biasing circuits, single transistor amplifiers and their frequency response; electronic circuits using operational amplifiers; simulation using OrCAD or Multisim.

#### EE 231 Basic Electrical Engineering

Electromechanical energy conversion; transformers, DC and AC machines special purpose motors; basic components of a modern electrical power system: generation; transmission, distribution and utilization of electrical power; protection of power system.

#### **EE 251 Signals and Systems** Types of signals; unit impulse and unit step functions; linear time invariant (LTI) systems and their properties; convolution sum and convolution integral; Fourier series, Fourier, Laplace and Z transforms; analysis and characterization of LTI systems using various transforms.

#### EE 271 Data Structures and Algorithms

Algorithms for solving various searching, and sorting problems; Arrays, Records, Set structure, Stacks, Queues, Singly and Doubly Linked Lists, Recursive versus Iterative Algorithms, Trees, Binary Trees, Tree traversal (In-order/Pre-order/Post-order

(in order) The order) For order traversal), Conversion between trees and heaps, Heaps, Heap-sort, Graphs as Adjacency Matrices, Traversal of Graphs ( DFS, BFS), Path lengths, Shortest Path, Searching & Sorting Algorithms (Insertion sort, Selections sort, Merge sort, Radix sort),and Hashing.

#### EE 341 Electromagnetic

Extension of static electric and magnetic fields to time-varying fields and electromagnetic waves; Maxwell's equations; propagation of electromagnetic waves through different types of media and their behavior at the interfaces.

#### EE 351 Probability and Stochastic Processes

Set theory and counting principles, axiomatic definition of probability, independence and conditional probability, Bayes' theorem; random variables (RVs) and their cumulative distribution function, probability mass functions, probability density functions and moments; joint RVs; limits theorems; introduction to stochastic processes; applications.

#### EE 311 Integrated Electronics

Advanced theoretical concepts of electronic devices; device and circuit models in simulation packages such as OrCAD; FETs and their frequency response, operational amplifier theory and applications, linear digital ICs, feedback and oscillator circuits and power supplies.

#### EE 321 Communication Systems

Introduction to fundamental principles underlying the analysis, design and optimization of analog and digital communication systems; modulation techniques for analog and digital communication; effects of interference and noise and their suppression.

## BS IN COMPUTER SCIENCE S c h o o l o f S c i e n c e & E ng i n e e r i ng

**Computers** are behind most of the things that make the modern world fascinating, convenient and advanced; computer games and animations, special effects in movies, chat, social networking, video calls, smart phones and tablets. Computers guide rockets in outer space, help companies optimize their businesses, and allow families to share their lives even when they are continents apart.

Our Computer Science program will take you behind the scenes and show you how it is all done. World class academics, each an expert in their own field, will take you through topics from programming to computer architecture to software engineering to computer graphics. Along the way, you will work on interesting projects of your own and learn to successfully use and apply technology across diverse fields. Graduates from the Computer Science program will have exciting career opportunities opened up from then in fields such as software engineering, web designing and development, interactive media development, information systems analyst, 3D graphic programming, mobile application development, game design and programming and data analysis.



School of Science & Engineering





# PROGRAM THRUSTS

#### Security

More and more, we store and communicate our data with the help of computing devices and networks. Our social information exists on the servers of social networking websites. We make financial transactions using online banking. We send out emails and read them on our smart phones. Security refers to making these transactions and devices safe from third party intrusion. There are many aspects to security. How to secure data stored on your own computer? On the cloud? How to transmit data over the network such that it does not leak information if intercepted? How can the network be made secure? Intrusions, or attacks, can and are used to steal personal information, monitor your computer activity, to use your device for malicious purposes without your permission, to cripple the infrastructure of a country, and target strategic assets. Security is the craft of analyzing a computer system in order to identify vulnerabilities and to secure them from possible attacks.

#### **Big Data**

As computing devices become more powerful, data is being generated in massive volumes and at incredible rates. Every two days now we create as much information as we did from the dawn of civilization up until 2003, more specifically five exabytes. In almost every sphere of life, data is being generated and recorded – shopping habits, social network activity, search history, browsing patterns, financial transactions, etc. The amount of data in question is overwhelming for traditional data analysis techniques. "Big Data" is the term used to describe the study of dealing with such huge amounts of data - filtering it, storing it, searching through it, categorizing it, detecting trends and patterns, making recommendations based on it, summarizing it, presenting it in human friendly ways, etc. Businesses everywhere are using Big Data techniques to better understand their users and optimize their practices accordingly.

#### **Cloud Computing**

Cloud Computing is the new paradigm in computing. Many of us are already familiar with the concept of storing our data online or "on the cloud", e.g. our emails, photos etc. But that is only one aspect of Cloud Computing. Using Cloud Computing, it is possible to run programs on the cloud and, going deeper, even develop those programs online. The study of Cloud Computing explores systems that offer these services - how can services be made available over a network connection, how can multiple systems possibly in multiple locations work together to deliver the same service, how should data be stored so that it is available instantly from anywhere, etc.

#### Computer Graphics &

#### Visualization

Of all their five senses, humans can take in and process the most information through the visual channel. Recall the saying, "A picture is worth a thousand words". That is why most information is presented to humans visually and the state of interfaces developed for the other four channels is relatively poor. Visualization is the study of presenting data, possibly in large amounts, which would otherwise be difficult for humans to understand and process, in a visual format. This ranges fromsimple bar charts to complicated infographics. The study of Visualization encompasses the study of human psychology and the human visual system to understand what appeals to humans, what humans pay attention to, how they process information and what are the physical processes involved. It involves analyzing data in order to identify salient features in a given data set and it involves design so as to create representations that are not only faithful to the underlying data but are also visually appealing. The study of Computer Graphics is the study of visual objects or "graphics" created with the help of a computer. Different aspects of Computer Graphics include creating such objects from scratch (3D modeling), acquiring digital representations of real world objects, e.g. scanning actors to obtain their digital replicas for use in movies, manipulating these

objects(animation and editing), interactively controling these objects (computer games), specifying the behavior of these objects(simulation), displaying graphics on a computer screen (rendering) and efficient hardware designed for the purpose (GPUs), making the graphics appear as real as possible (photorealism), and digitally exploring the graphic (virtual tours). Computer Graphics is used, among others, in architecture to visualize architectural plans, in medicine to obtain digital representations of organs that can be better analyzed, in games and movies to create fantastic worlds, in engineering to design parts, in 3D printing to prepare models to be printed, in museums to provide interactive displays of otherwise inaccessible artifacts, in scientific applications to study the behavior of an object in different conditions, e.g. simulating airflow over the wing of an airplane, for training purposes, e.g. flight simulators, in advertising to create otherwise unachievable visualizations.

# COURSE SNAPSHOTS

#### CS 110 Computational Thinking I

Learning to identify problems and approach their solution in a manner that lends itself to a computer implementation; topics include: top-down and bottom-up problem solving, variables, control structures, functions, modularity, divide-and-conquer, iteration, recursion, algorithms and their expression as pseudo-code, flowcharts and program code.

#### CS 111 Computational Thinking II

Provides a comprehensive introduction to modern computer science; covers the mathematical foundations of Computer Science ranging from propositional logic to automata and computability; topics include: proofs, probability and randomness, recursion relations, O-notation, graph theory, quantum computing and formal methods.

#### CS 130. Digital Logic and Design

Introduction to the design of digital hardware, realization of computation with logic gates; Boolean algebra, design of combinational logic circuits and analysis and design of clocked sequential logic circuits, circuits for arithmetic operations; introduction to hardware description language and its application to logic design. CS 132 Elements of Computing Systems

Explores the construction of a modern, full-scale computer system from the ground up; exposure to major Computer Science abstractions studied in detail in later courses; 12 implementation projects focusing on building the hardware platform and software hierarchy of a computer system.

CS 200 Data Structures and Algorithms Study of common data structures: singly and doubly linked lists, skip lists, binary search, B-trees and tries, self-balancing trees (AVL, red-black, splay), heaps and treaps, binomial and Fibonacci heaps, graphs and minimum spanning trees, LIFO/FIFO structures (queues and stacks), priority queues, maps, multi-maps and hash tables, conflict resolution in hashing.

CS 212 Theory of Computation Investigates the nature and limits of computation; topics include: finite automata, regular expressions, context-free grammars, Turing machines, Church-Turing thesis, decidability, halting problem, reducibility, time and space measures, complexity classes, P vs. NP. CS 222 Programming Languages Evaluates the strengths and weaknesses of various programming languages; considers at least two different programming languages; topics include: functional, procedural, imperative, generic, and structured programming, parallel programming and concurrency control, web programming, meta and generic programming, meta and generic programming, compiled and interpreted languages, lambda calculus and anonymous functions.

CS 226 Parallel Programming Discusses the theory and practice of interacting software and hardware entities, and arising problems such as stable failures; uses the theory of formal methods to provide deep insights into the nature of stable failures; uses programming examples that range from basic two node networks to highly complex software constructs for big data processing.

The rise of Google, the rise of Facebook, the rise of Apple, I think are proof that there is a place for computer science as something that solves problems that people face every day.

Eric SchmidT



Dr. Anzar Khaliq taking a selfie with students at the orientation

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# THE META-CURRICULAR Experience

Meta-Curricular - meta-cur•ric•u•lar - \' mā-tä-kə-' ri - kyə- lər\ From Greek in the midst of, in common with, by means of, in pursuit or quest of the curricula.

At Habib University, learning doesn't end in the classroom. Student life at Habib goes beyond rudimentary academics. It flows from the doors of our classrooms into the hallways, courtyards, spaces and into all aspects of University life itself. You will gain a broad based education, making it an experience that goes beyond conventional academics.

The meta-curricular experience is not restricted to solely prepare you for your career. Rather, it prepares you for life itself. Students can get involved in a myriad of ways.

Join the student government, plan and facilitate theater performances, musical events, book discussions and academic lectures. Habib University's support and resources will be with you.

I am a huge fan of Manto. Directing and executing one of Manto's plays on stage would be an incredible experience. Seeing it come to life in the grand Amphiteater is something I've been looking forwared to ever since I got accepted into Habib University.

> Moizza Salahudin Class of 2018



Student Life is an integral part of Habib University and will play a key role in a student's overall experience. Students will have multiple outlets for exploring, enhancing and applying their diverse forms of knowledge.





## CAMPUS RECREATION & SPORTS

Habib University has a top notch gymnasium and several recreational sports facilities for the campus community. These include a swimming pool, separate male and female gyms, and multi use sports courts. The student lounge, and the game room is an area for students to kick back, relax, and enjoy a few moments between and after classes.





# STUDENT GOVERNMENT

The Student Government Association (SGA) plans and organizes all of the open activities on campus, approves organizational petitions, and is actively involved in the overall Campus Life program.

## WHY JOIN THE Sga?

- Building Personal Networks
- Learn Organizational and
- Management Skills
- Improving Leadership Skills
- Develop and Strengthen
- **Communication Skills**



# **STUDENT MEDIA**

Student Media operates an online campus newspaper run by the students.

Additionally Student Media works with the Communications Studies and Design program to provide students with practical experience in journalism and photography.

# AIM HIGH-YOUR YOURNEY BEGINS HERE

# CENTER FOR CAREER EXCELLENCE

CCE strives for enhancing the student experience through meaningful and practical campus and off-campus work opportunities as well as engaging with students to support them as they continue to develop and explore their passions and competencies. Our robust network, services and programs assist students in important transitions, personal discoveries, and in actualizing goals and ambitions. We strongly believe that a student's worth and future should not be solely reduced to getting a job, rather we promote the importance of being engaged in activities throughout life which are beneficial and purposeful for one's self as well as the greater community.

Snapshot of Key Services Offered by Center for Career Excellence:

*Markaz-ul-Mawarid* – offers you tons of reading material and key resources that feeds you with the important information required to make important career decisions.

**Career vGuide** – A virtual guide book loaded with tips, tactics, video presentations, illustrations, pictorials, etc to help you in understanding more about career planning and things to keep in mind on various stages of your career such as information to put in resume, tips for excelling in an interview, etc.

#### Career Cartography -

Workshop Series that focuses on developing various skills that enables students to gauge deeper understanding of multitude of skills required by a professional and give them hands-on learning experience.

Kaava Khana Series – gives you an opportunity to do some aspirational and intellectual 'Gupshup' with the real achievers in life. The success stories shared in the Kaava Khana sessions will help you understand how 'the road to success' exactly looks like. **Career Confabs** – Career Talks given by professionals in the industry deepens your understanding of variety of career options available for you. These talks give you a chance to put up your career confusions to the experts and discover ways to deal with them and establish a clear vision for your career.

Career Help Desk – Career advisors provide you individualized career advising by keeping in mind your interest, skills, values and personality. Externships and Internship Programs – are integral for professional preparedness and success in career. CCE supports you in acquiring externships and internships opportunities that provide sneak peak at professional life and great experiential learning.

**Placement Services** – From online job portal to career fairs, CCE helps you in getting placed in the best and most desirable organizations by all possible means.

#### **Student Employment**

Services - Provides students with convenient work-study - on and off campus employment opportunities to not only help students financially but also to help them be engaged in such activities that polishes their competencies.

**Career Convention** – a yearly event that serves all that CCE owns. A blend of the best of guest speaker session, workshops, networking events followed by fun elements as well.







#### Dr. Charles Timothy Spracklen, Dean of Research and Continuing Education

Dr. Spracklen possesses over four decades of teaching, administrative and consultancy experience in academia and various international non-profits and government organizations. Deeply passionate about creation of new knowledge, he believes a robust research environment is a driver for innovation and creativity at any university. He envisions the Office of Research and Continuing Education to play a pivotal role in advancing research and acting as an 'enabler' for national and international academics and professionals to connect with each other.

Before joining Habib University, Dr. Spracklen taught and headed Electronics in the Department of Engineering at Aberdeen University in northern Scotland. During the course of his diverse career, Dr. Spracklen consulted with organizations and ministries around the world including – but not limited to – the Comprehensive Nuclear Test Ban Treaty Organization, United Nations; Defense Threat Reduction Agency, US Department of Defense; Ministry of Telecommunications, China; Air Weapons Complex, Pakistan; and the Ministry of Education, Sri Lanka.

Dr. Spracklen has produced over 120 academic and technical publications in electronic journals, and holds three patents in communications and related fields.

## RESEARCH AND Scholarly Interests

I research and publish on adaptive modulation and forward error correction strategies for future mobile telephone networks, and hardware compilation algorithms, strategies and neural networks.

## HOBBY THAT WOULD MOST SURPRISE MY STUDENTS

I'm a licensed pilot, and I've been flying for the past 25 years. I can't wait to start flying at the Karachi Flying Club- just waiting on my license to be transferred. Did you know I wanted to become a commercial airline pilot before I went off to college, but a medical limitation set me back?

## BEST THING About being at Habib University

It sounds clichéd but honestly it's the excitement on this campus- it's almost like the calm before the storm, the calm before something spectacular happens. The students' hunger to learn is visible and nothing makes me want to teach better, than a student receptive to knowledge.

I THINK AN ACADEMIC SHOULD BE SLIGHTLY UNUSUAL, NOT A STUFFY, ROBOT-LIKE CREATURE TRUDGING ABOUT CORRIDORS.



#### Dr. Jibran Rashid, Assistant Professor, Computer Science, SSE

A native of Karachi, Dr. Jibran Rashid has degrees in Computer Science from Carnegie Mellon, USA and University of Calgary, Canada. Before coming to Habib University in July 2014, Dr. Rashid was working on employing quantum behavior to improve our ability to process information at the University of Lugano, Switzerland.

A recipient of the University of Calgary, Department of Computer Science teaching award Dr. Rashid's passion for research is equally matched by his drive to foster a learning environment for his students. He was awarded the Queen Elizabeth II scholarship for the duration of his PhD program and his doctoral thesis was nominated for Canadian Governor General's gold medal.

# **RESEARCH AND SCHOLARLY INTERESTS**

My research deals with the nature of correlations encountered in the physical world and their application in improving our ability to process information. In the last few decades we have realized that quantum correlations can be thought of as an information theoretic resource rather than as apparent paradoxes. My research attempts to unify our understanding of the limits on quantum behavior using tools from computer science. This in turn yields future possible applications for quantum information. We have come far in our understanding of what Einstein famously referred to as "spooky action at a distance". A lot more still needs to be done before we can harness these quantum phenomena for practical quantum computing.

# HOBBY THAT WOULD MOST SURPRISE MY STUDENTS

I've trained in Japanese sword fighting- Kendo for almost two years. In fact I'm looking for a Kendo center in Karachi, so I can start training again.

# **BEST THING ABOUT BEING AT HABIB UNIVERSITY?**

I have a lot of freedom in designing my courses. That way we are teaching CS 101 at Habib, is unique. It's not just blind rote and practice, rather I'm hoping for the students to see the theory and beauty of computer science in action, in the world they inhabit.

#### Dr. Nosheen Ali, Program Director, Social Development and Policy, AHSS

Dr. Nosheen Ali has an undergraduate degree in Computer Science from the Lahore University of Management Sciences, and a Ph.D. in Development Sociology from Cornell University. After finishing her Ph.D., she received the Andrew W. Mellon Foundation/ACLS Early Career Fellowship and became a visiting scholar at the Abbasi Program in Islamic Studies at Stanford University.

Before joining Habib University, Dr. Ali was a Lecturer and Visiting Scholar at the Center for South Asia Studies in UC Berkeley, where she helped steer the Berkeley Urdu and Pakistan Initiatives. Her current research examines the history and nature of poetic knowledge in South Asia. She is a founding member of the international network GRASP (Group for Research in the Anthropology, Sociology, and Politics of Pakistan) and serves on the editorial board of the South Asian journal, SAMAJ.



# **RESEARCH AND SCHOLARLY INTERESTS**

- State-making and social movements
- Development and alienation
- Muslim cultural politics
- Poetic knowledge
- Information technology and social change
- Kashmir, Pakistan, South Asia

# WHY HABIB?

You know when I was approached to head the SDP program at Habib University, I took the job because I knew, I just had a feeling, that we were doing something different here- something unique, that has never really been attempted in Pakistan. The energy afoot on this campus is contagious.

### NO ONE IS TAKING ANYTHING FOR GRANTED HERE. Students, staff and faculty alike are cognizant of the fact that habib university is history in the making

Nauman Naqvi, Dean and Founding Faculty, School of Arts, Humanities and Social Sciences

#### Dr. Nauman Naqvi, Acting Dean and Founding Faculty, School of Arts, Humanities and Social Sciences

Professor Nauman Nagyi has had a remarkably diverse career experience, both inside and outside the academy. Beginning with a bachelors in philosophy from Reed College in 1992, he worked as an Assistant Editor at Newsline, Karachi, with its acclaimed editor, Razia Bhatti and later, from 1997 to 1998, he was a Producer in the Urdu section of the BBC World Service in London. In the interim, from 1995 to 1997, his commitment to research took him to the Sustainable Development Policy Institute in Islamabad to work with the heterodox development thinker Tariq Banuri, as the Managing Editor of the Institute's publications unit. Dr. Naqvi then returned to the academy in 1998 to study anthropology at Columbia University under Nicholas B. Dirks and Partha Chatterjee, and wrote his dissertation on the history of modern Urdu literary-critical culture, especially with respect to the problematic of the ghazal at key moments in the trajectory of Indo-Muslim nationalism. While still a graduate student, he was selected to teach Columbia University's core curriculum flagship course on the history of Western moral and political thought, 'Contemporary Civilization.' His first appointment on receiving his Ph.D. in anthropology was the award of a Mellon Postdoctoral Fellowship in Brown University's Department of Comparative Literature and the Cogut Center for the Humanities, with further affiliation in the Department of History, where he taught courses in the literature of Partition, and on postcolonial studies and theory from 2007 to 2009. Dr. Naqvi was then again awarded a Mellon Postdoctoral Fellowship, this time at the Toor Cummings Center for International Studies and the Liberal Arts at Connecticut College, where he taught courses in the departments of both literature and anthropology from 2009 to 2011.

# **RESEARCH AND SCHOLARLY INTERESTS**

Dr. Naqvi's thought and work ranging across anthropology, history, literature and philosophy, is centrally concerned with retrieving the universal from vernacular experience and forms of knowledge, a dimension of universality that has been shackled and buried under colonialism and modernity. At Habib University, Dr. Naqvi is committed to the institutionalization of a core curriculum program that will combine the histories of both regional and Western humanities and social thought to produce the most strenuous universalism in the students of Habib. He is also involved in the production of state-of-the-art curricula for Habib University's programs in Social Development and Policy, and Communication Studies and Design, that respond to the local and regional inheritance, practice and realities, and that anticipate the emerging horizon and landscape of these fields.

## WHY THE LIBERAL CORE?

The question of ethos – the way we are, our ethics, the way we live together – is central to the project of Habib University. You cannot know who you are, what the world is without the past, without your inheritance – indeed, language itself is part of your inheritance. The liberal core is essential to the task of thought and the task of self-cultivation. To think, be open to multiple perspectives and opinions, to build tolerance and to seek knowledge- that is what the liberal core is all about.



### **SCHOOL OF SCIENCE AND ENGINEERING FACULTY**

Dr. Shoaib Zaidi, Doctorate – Electrical Engineering, University of New Mexico, NM – 1998 Dean of School of Science and Engineering

Dr. Timothy Spracklen , Postdoctoral Fellow, University of Leicester, UK, 1977 Dean or Research and Continuing Education

Dr. Anzar Khaliq, Ph.D. in Physical Chemistry, Université Pierre et Marie Curie, Paris, France

Dr. Jibran Rashid, Ph.D. in Computer Science, University of Calgary, Canada

Dr. Mohammad Shahid Shaikh, Ph.D. in Electrical Engineering, McGill University, Canada

Dr. Muhammad Shumail, Ph.D. in Electrical Engineering, Stanford University

Dr. Oleg Artamonov, Ph.D. in Mathematics, University of Kaiserslautern, Germany

Dr. Oliver Faust, Ph.D. in Electronics, University of Aberdeen, Scotland

Dr. Samina Yasmin, PhD in Biological Chemistry, University of Oxford, Oxford, United Kingdom

Dr. Shah Jamal Alam, PhD in Social Simulation, Manchester Metropolitan University, Manchester, UK

Dr. Waqar Saleem, Ph.D. in Computer Graphics, Max Planck Institut (MPI) Informatik, Saarbruecken, Germany

#### SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES FACULTY

Dr. Nauman Naqvi, Ph.D. in Anthropology, Columbia University, New York, USA Acting Dean & Founding Faculty, School of Arts, Humanities and Social Sciences

Dr. Nosheen Ali, 2009 Ph.D., Development Sociology, Cornell University Program Director, Social Development and Policy

Dr. Aaron Mulvany, Ph.D. in South Asian Studies, University of Pennsylvania, USA, 2011

Dr. Fahd Ali Ph.D. in Economics, The New School for Social Research, New York, USA (2014)

Dr. Hasan Ali Khan, Ph.D., Arts and Humanities, School of Oriental and African Studies, University of London, UK, 2009

Jamil Dehlavi, BA French Literature & Politics, Oxford University

Dr. Markus Heidingsfelder, Ph.D. in Literature and Media Studies, Ludwig-Maximilians-University, Munich, Germany

Saima Zaidi, MSc in Communication Design, Pratt Institute, New York.

# HABIB TUTORIALS: EIGHT STUDENTS ONE PROFESSOR

#### HOW WE SELECT OUR STUDENTS

71/1

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25%

140/

20/

Here at Habib University we conduct what is known as a holistic review. Each and every application is reviewed thoroughly, and while test scores and academic standing is important, we look beyond the monotony of numbers and statistics. We believe every student has a personal story to telland our unique application process reflects this belief. We ask you for a statement of purpose, and call you in for an introductory talk so that we can get to know you, beyond the transcripts.

Habib University's application pool is competitive and diverse. We have students from a myriad of different educational backgrounds, with varied interests. You can find your niche at Habib University and thrive in its brilliant educational atmosphere.

#### THE CLASS OF 2018 COMES FROM VARIED EDUCATIONAL BACKGROUNDS

CAMBRIDGE INTERNATIONAL EXAMINATION

**BOARDS OF INTERMEDIATE EDUCATION PAKISTAN** 

AGA KHAN UNIVERSITY EXAMINATION BOARD

INTERNATIONAL BACCALAUREAT

AMERICAN HIGH SCHOOL DIPLOMA

**BOARD OF TECHNICAL EDUCATION PAKISTAN** 

Tell us your story. Share with us your personal experiences. Use our admissions application to distiguish and set yourself apart from other applicants.

# SIONS

#### WHO CAN APPLY

Students who have completed or will complete Intermediate/A' Levels/High School Diploma/International Baccalaureate by August 2015 are eligible to apply.

#### SUBJECT REQUIREMENTS BY PROGRAM

#### BSc (Honours) Social Development and Policy

Students from any subject background i.e. from Pre-engineering, Pre-medical, Commerce, Finance, Business, Social Sciences and Arts can submit their applications.

#### BA (Honours) Communication Studies and Design

Students from any subject background, i.e. from Pre-engineering, Pre-medical, Commerce, Finance, Business, Social Sciences and Arts can submit their applications.

#### **BS Electrical Engineering**

Students must have Mathematics, Physics and Chemistry as A Level and Higher Secondary school subjects.

#### **BS** Computer Science

Students from Pre-Engineering, Pre-Medical\*\* and General Science groups, with Physics as a compulsory subject can apply.

\*\*A summer Mathematics program will be organized for Pre-Medical students to satisfy pre-requisite requirements.

#### **HOW TO APPLY**

- Step 1: Sign-up and create an account at www.habib.edu.pk
- Step 2: Complete your on-line application
- **Step 3:** Pay the application fee
- Step 4: Upload all the required documents
- Step 5: Review your e-application and submit it
- Step 6: Submit the scholarship and financial aid application
- Step 7: Appear for the Entrance Test
- Step 8: Appear for the interview (shortlisted applicants only)

#### **TUITION AND FEES: A VALUABLE INVESTMENT FOR A SUCCESSFUL FUTURE**

Tuition & Fee Undergraduate Programs 2014-15:

#### **FIRST YEAR FEES AND COSTS**

Enrollment Fee Security deposit (refundable) 75,000 PKR 25,000 PKR

#### PER SEMESTER (TWO SEMESTERS PER YEAR)

Tuition450,000 PKRLab Fees\*150,000 PKR(For School of Science and Engineering only)\*

## WE OFFER A WORLD CLASS EDUCATION, AND ARE ACCESSIBLE TO ALL DESERVING, HIGH MERIT STUDENTS. APPLY FOR OUR UNMATCHED FINANCIALAID AND SCHOLARSHIP PROGRAM AND TAILOR MAKE YOUR OWN FINANCIAL PLAN FOR THE UPCOMING FOUR YEARS.



# EXPERIENCE THE BENEES FINANCIALAD & SCHOLARSHP PROGRAM

# **OBACINE OF STUDENTS GOT SOME FORM OF FINANCIAL AID AND ASSISTANCE**



Given in Scholarships

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**MILLION RS** Highly subsidized Student Loans

> MILLION RS Given in Zakat and Khums

5 YOHSIN Scholarships (100%) 8 Scholarships (80% Financial Aid) With a promise of ensuring equal opportunities to all its prospective students, Habib University has unmatched Scholarship and Financial Aid programs supporting complete four-year study at Habib University. Habib University's leadership has made a strong commitment to meeting the demonstrated need of each and every one of our students. A student's ability to pay the tuition fee will not impede them from joining Habib University. Qualified students are encouraged to apply for Habib University's scholarship and financial aid packages as soon as they complete their admission application form.

#### **20 DISTINGUISHED YOHSIN SCHOLARSHIPS**

One of the highest honors for incoming students, these scholarships are highly competitive. Based solely on merit, these scholarships are meant for exceptional students. Habib University will decide on the recipients of this scholarship, but applications are open to all. Distinguished Student Scholarships are awarded irrespective of the applicant's financial needs.

#### **OVER 80 MERIT SCHOLARSHIPS**

A minimum of 80 Merit Scholarships are to be awarded per cohort, based both on achievement and demonstrated family financial need. These will cover up to 80 percent of all tuition costs.

In order to be considered eligible for scholarships, the application form must be completed. Apply for scholarships at http://scholarships.habib.edu.pk/

#### HOW OUR FINANCIAL AID IS PACKAGED

Habib University's commitment to meet the 100 percent demonstrated financial need includes a very strong need based Financial Aid program. This program include the following types of financial assistance:

**Grants:** These are need-based funds that are awarded based on the financial aid application. Grants are subject to an annual review of a student's financial circumstances. Grants do not need to be repaid

**Student Loans:** Habib University offers need-based student loans, with a facilitative re-payment process. You will be expected to start paying back your loan, six to twelve months after graduation. Habib University also offers work-study programs that will allow you to pay off a portion off your loans during your four years as a student. These methods ensure that loans will not become a liability for those who avail this payment option.

**Student Employment Opportunities:** A portion of financial assistance may be assigned to Work Study programs. While participating in Work Study Programs, a student is employed on campus for a maximum of about 20 hours a week. Students are paid an hourly wage in exchange for their work

For more details and to apply for Financial Aid, visit http://habib.edu.pk/need-based-financial-aid/ Contact us at +92 322 2850253 or send us an email at *financialaid@habib.edu.pk*




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CLASSOF 2019 H



# Be a part of history Be a part of Habib University

# CONTACT US

## **ADMISSIONS HELP DESK**

For more information Send us an email at admissions@habib.edu.pk Visit the Admissions Office at Habib University City Campus

#### **SCHEDULE A CAMPUS TOUR**

Send us an email at studentinfo@habib.edu.pk

# FOR SCHOLARSHIP AND FINANCIAL AID DETAILS

Send us an email at financialaid@habib.edu.pk

# **MEET US AT**

Block 18, Gulistan-e-Jauhar, University Avenue, Off Shahrah-e-Faisal, Karachi.

## **FOLLOW US ON**

www.facebook.com / habibuniversity www.twitter.com / habibuniversity www.vimeo.com / habibuniversity







Keep My signature grnight get Famous Der J LEAD. Ger Our of They here Play h He i Such Lion. Much Kohsin. -Sameel Hore . LOL DON'T FEAR! DO WHAT U WANT! Lovo Habib University GO A HEAD -) Love YOHSIN." AST Chur 12 DHSIN OF THOUGHT Officially Habib Lions! HU IS Idventure Sc Hope ALL THE -wa needed preud Forma Nagin & Southand VNON. A It was Pither you all I chose HU. - Unzila Bilar start - A A ) an here for IN ALIRAZASTERUIS beginning. Tournet -OAL TO FC Herne Yes am a Habibil 2 www.habib.edu.pk