



**DOW UNIVERSITY OF HEALTH SCIENCES**

**INSTITUTE OF BUSINESS  
AND HEALTH MANAGEMENT**



# ABOUT

## INSTITUTE OF BUSINESS AND HEALTH MANAGEMENT

The Institute of Business and Health Management (IBHM) started working in 2007 as a constituent body of Dow University of Health Sciences. IBHM offers BSAF, BBA, MBA, and Executive MBA programs across two campuses in prime Karachi areas, aiming to serve a larger community population. Approximately 350 students are currently

enrolled in various undergraduate and graduate programs. Additionally, over 200 alumni work in prestigious national and international business organizations.

IBHM is continuously striving to improve the learning environment through technology and innovation. The Institute plans to offer a BS in Healthcare Management and Leadership and MS and Ph.D. programs in various business and health management disciplines.

IBHM has several unique characteristics that make it attractive to students, such as:

- Located amidst various business ventures such as Memon Medical Institute Hospital, Kiran Hospital, brand outlets, and banks.
- Paid internship and employment opportunities within 44 Dow facilities in its two (2) campuses:
  - **DMC Campus.**
  - **OJHA Campus.**

Some examples are the Riva Water Plant, Dow General Hospital, Vaccination Plant, Biological Products Manufacturing Plant, and the Dow Diagnostic Laboratories.

- IBHM students get exposure to practical implementation of business knowledge in diverse health disciplines, such as Nursing, Pharmacy, Medical Technology, and Biotechnology.
- Registered with the Association of University Programs in Health Administration (AUPHA) which is a US based non-profit entity that works to improve the delivery of health services globally.
- After Lahore University of Management Sciences (LUMS), IBHM is the second educational institution in Pakistan to have a Toastmasters Club, aimed at developing leadership skills in students.



# DEAN & DIRECTOR'S MESSAGE



## **PROF. DR. ASIMA FAISAL**

Post Doctorate (USA), PhD, MPhil, MBA & MBBS

Dean & Director IBHM

Chairperson Health and Pharmaceutical Management

Dow University of Health Sciences

*Welcome to the Institute of Business & Health Management (IBHM).*

At IBHM, we are moving boldly with a commitment to develop a culture of excellence, innovation, and collaboration to expand tomorrow's frontiers with our future healthcare and business leaders and entrepreneurs who can navigate the complexities of the healthcare and business industries driving a positive change.

Our programs combined with rigorous academic training are designed to equip students with the innovative thinking, collaborative leadership, and entrepreneurial spirit with knowledge and expertise needed to succeed in the ever-evolving landscape of healthcare and business management. Our curriculum focuses on interdisciplinary learning, research, and practical application to ensure our graduates are well-prepared to address the current and future challenges while driving positive change and excellence in their fields. To ensure that our teaching and training pedagogies remain at the forefront of industry standards, we have been diligently developing and refining our educational processes and policies.

We empower our esteemed faculty with the latest instructional technology and techniques through comprehensive training programs, equipping them with the tools and knowledge necessary to engage and inspire the students effectively. The aim is not just to meet curriculum goals but to exceed them, preparing the students, teachers, and staff to excel in their respective fields with confidence and competence empowering future healthcare leaders with the business acumen to transform the industry.

We at IBHM, believe that education should be more than just lectures and textbooks—it should be an immersive and transformative experience for our teachers as well as students. As our students embark on this journey with us, I urge them to embrace every opportunity, seize every moment, and dare to dream big. Their time at IBHM is not just about acquiring knowledge; it's about discovering their passion, honing their skills, and unleashing their full potential.

I invite you to explore our website, learn about our programs, and discover how we can help you achieve your goals. Together, let's shape the future of healthcare and business management and make a meaningful impact on society."

*With warm regards*

# ABOUT

## CENTER FOR TRAINING, EDUCATION, AND DEVELOPMENT

The Institute of Business & Health Management (IBHM) is setting new benchmarks through its diverse offerings in non-degree programs offering diplomas, certificate courses and workshops. IBHM empowers healthcare leaders and managers with cutting-edge knowledge and skills.

Under the visionary leadership of Prof. Dr. Asima Faisal, Dean, Faculty of Management Sciences, Director IBHM, and a team of accomplished faculty members, the institute will provide tailored learning solutions. These include executive-level open programs and customized organizational programs designed to address the unique needs of the healthcare sector.

C-TED's Executive Education Programs cater to a diverse range of entities, including private companies, small enterprises, corporations, government departments, defense agencies, and public sector organizations. These programs equip professionals with the skills needed to navigate complex challenges.

Additionally, C-TED offers short courses on current healthcare management topics and pressing concerns for business professionals. It also designs specialized programs to meet the specific needs of corporate clients, ensuring relevance and impact across industries.

Core Team Members of C-TED:

- **Prof. Dr. Asima Faisal (Dean, FMS & Director IBHM)**
- **Dr. Muhammad Sufyan Ramish (Program Director)**
- **Ms. Hira Hashmani (Assistant Manager Training & Development)**
- **Mr. Asim Mahmood (Coordinator)**

C-TED (Center for Training, Education, and Development) extends IBHM's management expertise and will collaborate

with leading business professionals to serve the broader business community. Combining extensive teaching experience with industry-relevant research and insights, the faculty ensures impactful learning.

C-TED is committed to fostering inclusive and solution-oriented dialogue by hosting conferences, roundtables, and dialogues that bring together faculty, thought leaders, policymakers, and entrepreneurs. These events aim to address pressing issues and generate actionable strategies.

# ADVANCE YOUR CAREER IN HEALTHCARE

The Center for Training and Executive Development (CTED) at the Institute of Business and Health Management (IBHM), Dow University of Health Sciences (DUHS) offers specialized professional diploma programs designed to prepare healthcare professionals for leadership, management, and system-level roles in an evolving healthcare environment.

These diploma programs are structured to provide a strong foundation in healthcare management, policy, technology, and organizational leadership, while maintaining a clear focus on practical application. Delivered by experienced faculty members, healthcare leaders, and industry practitioners, the programs integrate real-world case studies, applied projects, and experiential learning to ensure participants gain relevant, job-ready competencies.

## Professional Diplomas Offered

- Hospital Management & Leadership – Develop the strategic, operational, and leadership skills required to effectively manage and lead healthcare organizations.
- Digital Transformation in Health Informatics – Learn to leverage digital technologies, health information systems, and data analytics to enhance healthcare delivery, efficiency, and patient outcomes.
- Health, Safety & Environment (HSE) – Build expertise in workplace safety, regulatory compliance, and risk management to promote safe and healthy organizational environments
- Healthcare Project Management

## Key Learning Outcomes

- Enhanced leadership and management capabilities tailored to healthcare settings
- Improved understanding of healthcare systems, policies, and governance
- Practical exposure through case studies, simulations, and applied learning
- Professional networking opportunities with healthcare and industry experts
- Career advancement and professional growth in leadership and managerial roles

*Take Your Career to the Next Level*

# CURRENT IBHM OFFERINGS

## 4 MONTHS PROFESSIONAL DIPLOMA IN HEALTHCARE MANAGEMENT & LEADERSHIP

Course Content Overview: This comprehensive diploma program equips participants with the knowledge and skills needed to excel in healthcare management and leadership roles. The curriculum covers key areas such as:

### **01: Introduction to Healthcare Policies & Systems:**

This course explores the frameworks and dynamics of healthcare policies and systems, providing a comprehensive understanding of how policies are developed, implemented, and evaluated within various healthcare settings.

### **02: Mastering Lean: Driving Efficiency and Eliminating Waste**

This course will explore practical introduction to Lean Management, equipping participants with the skills to streamline processes, reduce waste, and drive operational efficiency. Participants will be able to apply Lean strategies to optimize workflows, improve productivity, and foster a culture of continuous improvement in their organizations.

### **03: Strategic Decision-Making and Leadership in Healthcare: Enhancing People Skills for Effective Engagement and Motivation**

This course focuses on developing strategic decision-making and leadership skills specifically tailored for the healthcare setting. It emphasizes enhancing people management abilities to effectively engage and motivate teams.

### **04: Hospital Architecture and Planning: Building for Better Health:**

This course will explore the principles of designing healthcare facilities, focusing on creating functional, patient-centered environments that enhance health outcomes. It covers spatial planning, regulatory standards, and the integration of technology for optimal healthcare delivery.

### **05: Health Promotion & Marketing:**

This course explores strategies for designing and implementing health promotion campaigns, focusing on behavior change theories and effective communication techniques. It emphasizes using marketing principles to advocate for public health and encourage healthy lifestyle choices.

### **06: Mastering Healthcare Quality Assurance: GMP and GCC in Medical Practice**

This course focuses on Good Manufacturing Practices (GMP) and Good Clinical Conduct (GCC) standards, emphasizing their application in healthcare to ensure quality, safety, and compliance. It covers best practices for maintaining clinical excellence and regulatory adherence in medical settings.

### **07: Economics for Health Leaders: Optimizing Resources in Healthcare Management**

This course will cover best practices for maintaining clinical excellence and regulatory adherence in medical settings.

### **08: Innovations in Healthcare: Harnessing AI**

This course will provide an overview of AI's growing role in healthcare and session objectives and Introduction to AI technologies and their relevance in healthcare.

#### **09: Accounting & Finance for non-financial managers:**

This course provides a foundational understanding of accounting and finance principles, equipping non-financial managers with the skills to analyze financial statements, manage budgets, and make informed business decisions.

#### **10: Evidence-Based Management: Medical Research for Health Leaders**

Participants will develop skills to critically evaluate research findings, integrate evidence into practice, and apply evidence-based strategies to improve patient outcomes and organizational effectiveness.

#### **11: Entrepreneurship and Leadership in Healthcare: Building and Leading Transformative Ventures**

Participants will learn to identify opportunities, create sustainable business models, and cultivate leadership skills necessary for driving change and transformation in healthcare organizations.

#### **12: Hospital Supply Chain Dynamics: Streamlining Operations and Enhancing Care**

This course examines the complexities of supply chain management in healthcare settings, focusing on strategies to optimize operations and improve patient care. Participants will learn about inventory management, procurement processes, and the integration of technology to enhance efficiency and reduce costs in hospital supply chains.

#### **13: Effective Conflict Management: Tools for Leaders and Teams**

This course provides leaders and teams with essential tools and strategies for identifying, addressing, and resolving conflicts in the workplace. Participants will learn effective communication techniques, negotiation skills, and methods for fostering a collaborative environment, ultimately enhancing team dynamics and organizational performance.

#### **14: Emotional Intelligence in Healthcare Crisis Management: Strategies for Effective Leadership**

Participants will learn to recognize and manage emotions in high-pressure situations, enhance communication, and build resilience. The course covers key EI competencies such as self-awareness, empathy, and relationship management, providing practical strategies to lead teams with confidence and compassion during challenging healthcare scenarios.

#### **15: Integrating Waste Management and Infection Control in Hospitals**

Participants will learn about hazardous waste handling, compliance with health regulations, and minimizing infection risks. Designed for healthcare professionals and hospital administrators, the course aims to enhance operational safety and promote sustainable practices within hospital systems.

#### **16: Hospital Ethics and Patient Safety**

The course covers common ethical dilemmas, patient rights, and strategies for fostering a culture of safety and accountability. Designed for healthcare professionals, this course equips participants with the tools to navigate complex situations, ensuring ethical standards are upheld while prioritizing patient safety and quality care.

# COURSE FACILITATORS FOR HOSPITAL MANAGEMENT & LEADERSHIP



UNDER DIRECTORSHIP OF

## PROF. DR. ASIMA FAISAL

Dean, Faculty of Management Sciences  
Director, Institute of Business and Health Management  
Dow University of Health Sciences, Pakistan

### EDUCATIONAL PROFILE:

- Post-Doctorate from Michigan State University, USA
- PhD - Business Management
- MPhil. - Management Sciences
- MBA - Health and Hospital Management,
- MBBS (MD)

Prof. Dr. Asima Faisal also holds a title of Clinical Assistant Professor (fixed term) in College of Osteopathic Medicine at Michigan State University USA. She has around 30 years of experience in the health industry serving diverse roles. In USA, she has worked in the domains of Population Health Management through Value based care. She had also worked as the Director Clinical Operations Michigan, Wellvana Health, looking after the field operations for building and operating a sustainable network of primary care physicians, specialists, and ancillary providers participating in value-based care agreements related to, DCE, Medicare Advantage, ACO and other at-risk populations.

In Pakistan, she has served as hardcore academician ranging from roles i.e. Senior Lecturer, Assistant Professor, Associate Professor and Now Professor in public and private business universities. Additionally she has worked for a pharmaceutical company conducting intellectual development initiatives for general population awareness and Physician's capacity building. She has authored and co-authored 26 research publications and supervised more than 50 MBA/MPhil Theses in her academic career. She has been a corporate trainer alongside her academic role and conducted trainings for primary care physicians, and healthcare professionals in pharmaceutical companies. As a General Physician and Manager Operations, she has been involved in OBGYN practice in Tertiary Care public & Private Hospitals, also in its strategic planning for clinical operations and staff training.

# TRAINERS



## PROF. DR. YAHYA NOORI

Professor of Microbiology and Director Digital Learning  
Dow University of Health Sciences

### EDUCATIONAL PROFILE:

- Ph.D. - Infection and Immunity from the University of Glasgow, UK
- MBA - Marketing
- MSc - Organizational Psychology
- MBBS - Dow Medical College

On a personal level, he is the founder of Numood ([www.numood.org](http://www.numood.org)), an Institute for Leadership Development. He is currently working towards the completion of a Master of Health Professionals Education (MHPE) from The Aga Khan University, which he wishes to complete by early 2025.

He is a certified religious scholar and has completed his 8 years of “Shahadat ul Alamia’ from “Wifaq ul Madaris ul Arabia’ and an MA in Islamic Studies from Karachi University. He is also voluntarily associated with Hidayah Academy and Al-Furqan Institute for teaching Hadith and Tafseer.



## DR. ABDUL RAHMAN ALEEMI

Associate Professor  
Institute of Business & Health Management, DUHS.

### EDUCATIONAL PROFILE:

- Certified Fintech Professional (CFF-Pro)
- PhD - Finance
- M.Phil - Finance
- MBA - Finance

His research interests fall in the area of Banking Regulations, Supervision and Stability. He is also a lead researcher in the area of banks’ Charter Value and Market Discipline. Dr. Aleemi possesses more than ten years of diversified experience of industry and academia. He is an experienced researcher and consultant in the field of Islamic and Conventional Finance, Economics, Management, Operations and Health Management.



## **DR. DILBAR A. SAEED**

Deputy Medical Superintendent  
Fatimiyah Hospital

### **EDUCATIONAL PROFILE:**

- **MBA - Marketing**
- **M.B.B.S**

Dr. Dilbar A. Saeed brings over 28+ years of diverse experience in the Healthcare and Pharmaceutical sectors. His expertise encompasses Marketing, Business Development, Medical Affairs, and Clinical Research, supported by a deep understanding of healthcare challenges and issues. Alongside his professional roles, he is actively engaged in community service and academic teaching / training, with a keen focus on Andragogy.

He has also been associated with the Institute of Business Administration (IBA) and Iqra University (IU) in the past.



## **DR. TASMIA ABEER BILLOO**

Director  
Sind Medical Stores

### **EDUCATIONAL PROFILE:**

- **MBA - Health and Hospital Management**
- **MBBS**

Dr. Tasmia Abeer Billoo is a seasoned professional with over a decade of experience in healthcare management, distinguished by her role as the Director of Sind Medical Stores. With a robust strategic business planning and operations management background, she has dedicated the past eight years to leading initiatives that enhance organizational performance and drive business growth. A visionary leader, Dr. Billoo excels in building strong client relationships and mentoring teams to achieve strategic goals. Her expertise spans financial management, high-stakes negotiations, and conflict resolution, ensuring efficient organizational operations and sustainable growth.

Active in various professional organizations, she was a director & also a member of the Pakistan-France Business Alliance, also was the Director of Pakistan Korea Business Forum, the Rotary Club of Karachi, and the Executive Committee of the Healthcare Devices Association of Pakistan.



## **DR. LUBNA MUSHTAQUE**

**Head of the Quality and Monitoring Directorate  
Indus Hospital and Health Network Karachi**

### **EDUCATIONAL PROFILE:**

- **MBA - Institute of Business Management, Karachi**
- **MPHIL - Institute of Business Management, Karachi**
- **Fellowship - Healthcare Quality Management**

Dr. Lubna is a Healthcare Quality and Patient Safety expert with experience of 18 years, currently working as Head of the Quality and Monitoring Directorate at Indus Hospital and Health Network Karachi. She did training in plastic surgery and worked at Saudi German Hospital Madina Munawara where she started her journey of patient safety and quality. She did the Patient Safety Programme from the Institute of Leadership Royal College of Surgeons Ireland.

Dr. Mushtaque holds extensive experience in setting up quality departments in national and international healthcare institutions of repute. She has experience in patient safety and risk management, hospital administration, Hospital accreditation, total quality management, health ethics, organizational change management, and health planning and policy making.

# 4 MONTH PROFESSIONAL DIPLOMA IN HEALTHCARE PROJECT MANAGEMENT

## COURSE OVERVIEW OF HEALTHCARE PROJECT MANAGEMENT

WEEKS	TOPIC
Week 01	<p><b>Introduction to Healthcare Project Management</b></p> <p>Introduction to project management principles in healthcare environments. Covers the unique complexity of healthcare systems, stakeholder diversity, operational uncertainty, and the role of project managers in healthcare transformation initiatives.</p>
Week 02	<p><b>Organizational Structures, Governance, and Healthcare Decision Systems</b></p> <p>Examines how hospitals and healthcare organizations are structured and governed. Introduces project governance, authority systems, reporting relationships, steering committees, and organizational influence on project execution.</p>
Week 03	<p><b>Project Initiation, Scope, and Stakeholder Identification</b></p> <p>Covers project initiation processes, project charters, business cases, scope definition, and stakeholder analysis. Focuses on balancing strategic objectives with operational healthcare realities.</p>
Week 04	<p><b>Change Management, Scope Expansion, and Integration Challenges</b></p> <p>Explores how healthcare projects evolve during execution. Covers change requests, scope creep, integrated change control, and the operational implications of uncontrolled project expansion.</p>
Week 05	<p><b>Project Planning Fundamentals and Project Management Artifacts</b></p> <p>Introduction to practical project planning tools including Work Breakdown Structures (WBS), Gantt charts, dependency mapping, milestone tracking, stakeholder maps, and project planning documentation.</p>
Week 06	<p><b>Scheduling, Critical Path, and Hidden Failure Mechanisms</b></p> <p>Covers project scheduling techniques, dependency analysis, critical path concepts, schedule compression, hidden delays, and how healthcare projects fail despite appearing “on schedule.”</p>
Week 07	<p><b>Measurement, Performance Monitoring, and Earned Value Concepts</b></p> <p>Introduces project measurement systems including Planned Value (PV), Earned Value (EV), Actual Cost (AC), Schedule Performance Index (SPI), and Cost Performance Index (CPI). Discusses dashboard interpretation and misleading performance reporting.</p>
Week 08	<p><b>Quality, Validation, Reliability, and Operational Readiness</b></p> <p>Examines quality management in healthcare projects, including validation, testing, operational reliability, and the difference between technical completion and real-world readiness.</p>

WEEKS	TOPIC
<b>Week 09</b>	<p><b>Risk, Uncertainty, and Predictable Failure in Healthcare Projects</b> Covers risk identification, qualitative and quantitative risk analysis, assumptions, uncertainty management, escalation risks, and hidden operational vulnerabilities in healthcare systems.</p>
<b>Week 10</b>	<p><b>Project Life Cycles: Predictive, Agile, and Hybrid Models</b> Introduces predictive, iterative, incremental, agile, and hybrid project delivery models. Focuses on selecting appropriate lifecycles for healthcare infrastructure, digital health, and clinical workflow projects.</p>
<b>Week 11</b>	<p><b>Stakeholders, Resistance, Change Management, and Behavioral Failure</b> Examines stakeholder influence, organizational politics, resistance to change, behavioral adoption, trust systems, and why technically successful healthcare projects often fail operationally.</p>
<b>Week 12</b>	<p><b>Communication Architecture, Escalation, and Executive Decision Flow</b> Covers communication planning, escalation pathways, governance communication, reporting distortion, dashboard risks, and how information changes as it moves across organizational hierarchy.</p>
<b>Week 13</b>	<p><b>Vendors, Procurement, Contracts, Cost, and Value Realization</b> Introduces procurement management, contract strategies, vendor governance, SLAs, fixed-price vs time-and-material contracts, benefits realization, ROI, and the difference between financial success and operational value.</p>
<b>Week 14</b>	<p><b>Ethics, Leadership, and Sustainable Healthcare Transformation</b> Covers project ethics, executive judgment, leadership responsibility, truthful reporting, project closure, transition to operations, sustainability, and long-term organizational impact.</p>
<b>Week 15</b>	<p><b>Unified Theory of Healthcare Project Management</b> Integrative synthesis of the course. Applies structural, behavioral, informational, and ethical alignment concepts to analyze why healthcare projects succeed or fail despite strong technical execution.</p>
<b>Week 16</b>	<p><b>Final Presentations, Applied Case Analysis, and Capstone Integration</b> Student presentations and comprehensive analysis of healthcare transformation scenarios integrating PMBOK principles, governance, stakeholder management, risk, communication, procurement, and executive decision-making.</p>

# COURSE FACILITATOR OF DIGITAL HEALTH & TELEMEDICINE:

## DR MOHAMED NAVID ABU AHMAD

PHD INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT - UNIVERSITY OF NORTH CAROLINA 2009

A multidisciplinary professional with expertise in medical science, machine learning, artificial intelligence, biomedical research, healthcare IT, and business analytics. With over 23 years of experience, he has worked in healthcare, finance, and telecommunications, holding senior roles at AmeriHealth Caritas, BlueCross BlueShield, and National Accounts Processing Company (NASCo) in the United States. His expertise spans AI applications in medicine, radiology, dentistry, data analytics, regulatory compliance, and enterprise IT systems. He has delivered AI and biomedical research workshops and has received multiple Best Papers and Innovation Awards.

## 4 MONTH PROFESSIONAL DIPLOMA IN DIGITAL HEALTH AND TELEMEDICINE COURSE OVERVIEW OF DIGITAL HEALTH AND TELEMEDICINE

WEEKS	TOPIC
Week 01	<b>Introduction to Digital Health and Telemedicine</b> Introduction to the evolution of digital health, telemedicine, and health informatics, including historical development, healthcare transformation, and emerging digital care models.
Week 02	<b>Digital-First Healthcare and Virtual Care Models</b> Exploration of digital-first healthcare systems, virtual consultations, remote primary care, and app-based healthcare delivery using real-world case studies such as Babylon Health.
Week 03	<b>Public-Scale Telehealth Systems</b> Study of national and public-sector telehealth systems, focusing on scalability, healthcare access, and operational integration through examples such as VA Telehealth.
Week 04	<b>Trust, Governance, and Failure in Digital Health</b> Examination of healthcare innovation failures, governance breakdowns, validation issues, and ethical concerns using cases such as Theranos.
Week 05	<b>Data Governance, Privacy, and Legitimacy</b> Analysis of healthcare data governance, patient privacy, data-sharing controversies, and public trust in digital systems through cases such as DeepMind-NHS collaboration.
Week 06	<b>Electronic Health Records and Workflow Architecture</b> Study of enterprise EHR systems, workflow redesign, documentation burden, interoperability, and operational complexity using Epic Systems as a primary case.

WEEKS	TOPIC
Week 07	<p><b>Wearables and Patient-Generated Health Data</b>            Exploration of wearable devices, continuous monitoring systems, remote sensing, and integration of consumer-generated data into healthcare workflows using Apple Watch as a case study.</p>
Week 08	<p><b>Artificial Intelligence in Clinical Decision Support</b>            Introduction to AI-driven clinical decision support systems, including opportunities, limitations, explainability, and real-world deployment challenges using IBM Watson for Oncology.</p>
Week 09	<p><b>Ambient AI and Clinical Documentation</b>            Study of ambient AI systems, AI scribes, automated documentation, and cognitive workflow redesign in healthcare environments.</p>
Week 10	<p><b>Population Health Intelligence Platforms</b>            Exploration of population health management systems, predictive care ecosystems, data integration, and risk stratification platforms such as Innovaccer.</p>
Week 11	<p><b>Predictive Deterioration Systems and Anticipatory Care</b>            Examination of predictive analytics in hospitals, deterioration detection systems, escalation protocols, and operational challenges using systems such as the Epic Deterioration Index.</p>
Week 12	<p><b>Hospital-at-Home and Remote Acute Care</b>            Study of remote wards, virtual hospitals, home-based acute care delivery, remote monitoring, and decentralized healthcare models.</p>
Week 13	<p><b>Digital Therapeutics and Software as Treatment</b>            Exploration of software-based therapeutic interventions, digital behavior change systems, chronic disease management platforms, and FDA-approved digital therapeutics.</p>
Week 14	<p><b>Platformization and Healthcare Ecosystems</b>            Analysis of integrated healthcare ecosystems, super-apps, platform economies, and digital healthcare marketplaces using systems such as Ping An Good Doctor.</p>
Week 15	<p><b>AI Clinical Co-Pilots and Augmented Medical Judgment</b>            Examination of AI co-pilots, clinical augmentation systems, human-AI collaboration, and cognitive decision support in healthcare environments.</p>
Week 16	<p><b>The CARE Framework: A Theory of Digital Health Systems</b>            Development and application of the CARE framework (Context, Architecture, Reliability, Ethics) as a unified theory for evaluating digital health systems</p>

# COURSE FACILITATOR OF DIGITAL HEALTH & TELEMEDICINE:

## DR MOHAMED NAVID ABU AHMAD

PHD INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT - UNIVERSITY OF NORTH CAROLINA 2009

A multidisciplinary professional with expertise in medical science, machine learning, artificial intelligence, biomedical research, healthcare IT, and business analytics. With over 23 years of experience, he has worked in healthcare, finance, and telecommunications, holding senior roles at AmeriHealth Caritas, BlueCross BlueShield, and National Accounts Processing Company (NASCo) in the United States. His expertise spans AI applications in medicine, radiology, dentistry, data analytics, regulatory compliance, and enterprise IT systems. He has delivered AI and biomedical research workshops and has received multiple Best Papers and Innovation Awards.

## 4 MONTH PROFESSIONAL DIPLOMA IN HEALTH, SAFETY AND ENVIRONMENT (HSE) COURSE OVERVIEW:

S.NO	TOPICS	LEARNING OUTCOMES	DURATION OF LECTURE
<b>Unit 01</b>			
01	QHSE- Foundation	Outline the Roles and Responsibilities of employers, Managers, Supervisors, Employees and other relevant parties. Explain the importance and the means of consulting employees and mean to achieve effective consultation.	
02	QHSE- Policy	Explain the purpose and importance of setting Policy for health and safety. Describe the features and contents of an effective Health and Safety policy. Key elements of health and safety policy. Standards and guidance related to health and safety policy.	
03	Hazards Identifications & Risk Management	Hazards Identifications & Risk Management	
04	OHSE Culture	The concept of safety culture. Factors influencing safety culture. Factors influencing safety related behavior. Improving health and safety culture. Internal & External influences on health and safety management standards. Identify indicators, which could be used to access the effectiveness of an organization' s health and safety culture and recognize factors that cause a deterioration.	

S.NO	TOPICS	LEARNING OUTCOMES	DURATION OF LECTURE
05	Risk Controls- Methods	Explain the aims and objectives of risk assessment. Distinguish between high frequency/ low severity events and low frequency/ high severity events. Identify hazards by means of workplace inspections and analysis of tasks. Use accident and near- miss data in risk assessments. Use a simple risk assessment technique to determine risk levels and to assess the adequacy of controls.	
06	Principles of Control	General Principles of Prevention. General Hierarchy of control. Signs used in HSE. Safe system of work. Confined space. Permit to work	
<b>Unit 02</b>			
07	Chemical & Biological hazards	Recognise chemical and biological hazards in the workplace. Explain the significance of the physical form of a substance to the related health hazard and the relationship between the route of entry into the body of a hazardous substance and its associated risk. Distinguish between acute and chronic ill - health effects. Make a preliminary assessment of the health risks from substances and biological agents commonly encountered in workplaces using basic survey techniques, suppliers' safety data sheets and simple environmental monitoring and testing methods. Apply a hierarchy of control measures to reduce the risk of ill - health caused by exposure to chemical or biological agents. Outline the basic principles relating to the disposal of waste and effluent and the control of atmospheric pollution.	
08	Fire Safety	Fire Triangle. Class of fire. Types of Fire Extinguishers.	
09	Electrical Safety	Explain electricity and the kinds of electricity. Explain how electrical service is provided. Define the terminology used in electrical work. Identify and use the safety practices that should be observed in doing electrical work.	

S.NO	TOPICS	LEARNING OUTCOMES	DURATION OF LECTURE
10	Vehicle and pedestrians Hazards	Identify the hazards that may cause injuries to pedestrians in the workplace and the control measures to reduce the risk of such injuries. Identify the essential elements of a safe workplace management strategy. Suggest ways of ensuring segregation of pedestrians and vehicles in the workplace and the appropriate control measures when segregation is not practicable. Suggest suitable measures to ensure the safe operation of vehicles on site. Explain the importance of site driver training as part an overall safety programme.	
11	Manual and Mechanical handling	Describe the main types of injury associated with manual handling. Carry out a manual handling assessment. Suggest ways of minimizing manual handling risks. Explain the training requirements for those who are required to manually lift loads. Explain the precautions and procedures necessary to ensure safety in the use and maintenance of forklift trucks, manually operated load moving equipment, lifts, hoists, conveyors and cranes.	
12	Construction safety	Identify the main hazards of construction and demolition work and outline the general principles necessary to control them. Identify the hazards of work above ground level and outline the general requirements necessary to control them. Describe the safe working practices for common forms of access equipment. Identify the hazards of excavations and outline the general requirements necessary to control them. Identify the hazards to health commonly encountered in small construction activities and explain how risks might be reduced.	
13	Work Equipment	Outline the general principles for the selection, use and maintenance of work equipment. Outline the hazards and controls for hand-held tools. Describe the main mechanical and non-mechanical hazards of machinery. Describe the main methods of protection from machinery hazards.	

S.NO	TOPICS	LEARNING OUTCOMES	DURATION OF LECTURE
14	Incident and Accident investigations	Explain the purpose of and procedures for investigating accidents and other events at work. Utilize records of accident and ill health experience in an organization. Explain the local requirements for notifying events to external agencies.	
15	Monitoring, Review & Audit	Use a variety of active and reactive monitoring procedures. Carry out a workplace inspection in order to set priorities and time scales for action and to assign action points to relevant personnel. Communicate inspection findings in the form of an effective and persuasive report. Differentiate between safety inspections, sampling and tours, and explain their roles within a monitoring regime. Explain the purpose of regular reviews of health and safety performance, the means by which reviews might be undertaken, and the criteria that will influence the frequency of such reviews. Explain the meaning of the term 'health and safety audit' and describe the preparations that may be needed prior to an audit and the information that may be needed during an audit.	
16	Physical and psychological hazards	Explain the term 'ergonomics' and the contribution that ergonomic design can make to health, safety and efficiency at work. Identify work processes and practices that may give rise to musculoskeletal health problems (in particular work-related upper limb disorders - WRULDs) and hand/ arm vibration syndrome (HAVS). Illustrate the nature and extent of musculoskeletal effects with reference to the use of display screen equipment (DSE). Identify common welfare and work environment requirements in the workplace. Describe the health effects associated with exposure to noise and suggest appropriate control measures. Describe the principal health effects associated with ionizing and non-ionizing radiation and outline basic protection techniques. Explain the causes and effects of stress at work and suggest appropriate control actions. Describe the situations that present a risk of violent assault to workers and suggest ways of minimizing such risk.	

S.NO	TOPICS	LEARNING OUTCOMES	DURATION OF LECTURE
14	Organization based Risk Management	How to analyze and mitigate organization based specific risk	
<b>Unit 03</b>			
01	Practical	Hazard Identification and their risk assessment and their Control measures at under develop site and submit report report	

## COURSE FACILITATORS OF HSE:

### DR. YOUSUF MAJEED:

A highly accomplished Occupational Health, Quality, and Safety Specialist with extensive experience in developing, implementing, and managing comprehensive Occupational Health and Safety (OHS) systems within industrial and healthcare environments. Demonstrated expertise in designing OHS manuals, safe work practices, health screening programs, and safety culture transformation initiatives at Pakistan Petroleum Limited (PPL). Proven track record as the focal person for ISO and OHSAS certifications, successfully leading medical services departments and field locations toward international compliance standards. Skilled in conducting occupational health and safety trainings, medical and safety audits, incident investigations, risk assessments, waste management protocols, food and kitchen safety initiatives, stress management programs, and first aid training. Recognized for effectively organizing and facilitating process safety workshops and health and safety culture change sessions for diverse workforce groups, contributing significantly to organizational safety excellence and employee well-being.

### MR. ZULFIQAR A.D:

Certified professional with experience in Developing & Implementing, Policy, Plan, Procedures based upon Sustainable Development Goals and Project Management Methodology in the Quality Management System ISO 9001:2015, Environment Management System ISO 14001:2015, Food Safety Management System ISO 22000:2018 + Halal "PS:3733-2022 (R) OIC/SMIIC1: 2019. GlobalGAP., HACCP, GMP. Corporate Social Responsibility ISO-26000:2010 & SA 8000, Fire Safety Engineering ISO-23932:2018 and Health & Safety Management System ISO 45001:2018. having 40 years of professional experience in conducting trainings in the Quality, Environment, Climate Change, Food Safety + Halal, HACCP & GMP, Corporate Social Responsibility, Industrial Relation & Labour Welfare Laws, Health, Safety & Environment and Fire Safety Engineering



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