



الجامعة الوطنية - السودان
National University - Sudan

Master of Sciences in Health Professions Education (MHPE)



Program Identification and General Information	
Program Specification	A master program by courses and complementary research
Program Name	Master of Sciences in Health Professions Education (MHPE)
Institution	National University, Sudan
Program College	Faculty of Medicine and Surgery
Department	Medical Education Center
Program Degree	Master of Science
Program Code	MHPE
Total Credit Hours for Completing the Program	42
Program Language	English

Introduction

In Sudan Medical and Health Professions Education is continuously expanding through the medical schools. This field is challenged by the lack of adequate university staff due to an imbalance in the ratio between qualified academic staff and the number of universities and medical schools. This implies a high need for qualified academic staff demonstrating apt knowledge and skills in educational process as a whole. For this, the National University-Sudan proposes a Master of Sciences in Health Professions Education (MHPE).

Program Vision

To become a leader of excellence and innovation in medical and health professions education in the region

Program Mission

To graduate medical and health professions educators capable of educating and inspiring the next generation through innovation, creativity, and the use of new educational technologies.

Program Objectives

The program is designed to meet the escalating need for qualified academics capable of educating and inspiring the following generations via innovations, creativities, and use of apt educational technologies in Medical and Health Professions Education to:

- Graduate excellent teachers, researchers, leaders, and innovators in medical and health professions education.
- Provide theory-informed, practice-oriented, evidence-based training in all aspects of the field
- Develop educators with a critical understanding of advances and developments in contemporary medical and health professions education.
- Equip medical and health professions educators with research and scholarship skills appropriate to medical and health professions' education.

- Prepare medical and health professions' educators for leadership roles in their colleges.

Program Learning Outcomes

Upon completion of the program, the successful candidates shall be able to:

- Apply the principles of learning theories in medical and health professions education.
- Design student-centered, competency-based, community-oriented, integrated curricula using scientific approaches.
- Create assessment tools complying with concepts of assessment and principles of psychometrics indices.
- Facilitate collaborative evidence-based instructions for small group and large interactive class sessions to achieve the pre-set learning outcomes.
- Develop tools for quality assurance, accreditation, and evaluation of medical and health professions education programs.
- Apply medical and health professions education concepts for planning, management, and governance
- Apply appropriate principles of research methods and scholarship
- Illustrate understanding of inter-professions' education, innovation, change models, and reform.
- Provide effective improvement consultative leadership
- Show competence in learning technologies to enhance educational processes

Admission Requirements

- Meet the conditions of the set regulations of the Ministry of Higher Education and Scientific Research (2022) for admission to master's degrees.
- Candidates must satisfy general regulations of the Faculty of Graduate Studies of the National University-Sudan for registration for Master's Degrees

- Eligible candidates must be holders of Bachelor's degrees in: Medicine, Pharmacy, Dentistry, Nursing, Medical Laboratories Sciences, Radiology, Physiotherapy, Anesthesia, Veterinary Medicine, or any bachelor's degree in Health science.
- Candidates should have an acceptable level in:
 - » English Language
 - » Mathematics and Statistics
 - » IT skills
 - » Four hours of availability per day.
- Two years of experience at least, or one year of experience in teaching
- Recommendation from two referees.

Study Program Plan

Semester One

Course	Credit Hours	Contact Hours	
		Theory	Practical
MHE-611 Introduction to MHPE مقدمة عن التعليم الطبي	2(2+0)	30	0
MHE-612 Planning, Management and Governance in MHPE التخطيط والإدارة والحوكمة في التعليم الطبي	2(1+1)	15	30
MHE-613 Principle of Teaching and Learning I أساسيات التعليم والتعلم I	3(2+1)	30	30
MHE-614 Principle of Teaching and Learning II أساسيات التعليم والتعلم II	2(1+1)	15	30
MHE-615 Curriculum and Course Design تصميم وصياغة المقرر والمنهج	4(2+2)	30	60
Total	13 (8+5)	120	150

Semester Two

Course	Credit Hours	Contact Hours	
		Theory	Practical
MHE-621 Community Oriented Education and Social accountability التعليم الموجه لخدمة المجتمع	2(1+1)	15	30
MHE-622 Instructional Methods in MHPE وسائل التدريس	3(2+1)	30	30
MHE-623 Collaborative Learning in MHPE التعلم التشاركي (التعاوني)	2(1+1)	15	30
MHE-624 Simulation, Technology and Innovation in MHPE المحاكاة التكنولوجية والابتكاري في التعليم الطبي	2(1+1)	15	30
MHE-625 Research and Scholarship in MHPE البحث والمعرفة في التعليم الطبي	3(1+2)	15	60
Total	12(6+5)	90	180

Semester Three

Course	Credit Hours	Contact Hours	
		Theory	Practical
MHE-631 Assessment and Evaluation in MHPE التقييم والتقويم	4(2+2)	30	60

MHE-632 Quality Assurance, Accreditation الجودة والاعتماد	3(2+1)	30	30
MHE-633 Faculty Enhancement تطوير الكادر الأكاديمي	2(1+1)	15	30
MHE-634 Leadership and Change Management in MHPE التغيير الريادة وإدارة	2(1+1)	15	30
Total	11(6+5)	90	150

Semester Four

Course	Credit Hours	Total Hours	
		Theory	Practical
MHE-641: Graduation project رسالة علمية Dissertation	6(0+6)	0	180
Total	6(0+6)	0	180

Program Courses Contents

Semester One:

MHE-611 Introduction to Health Profession Education:

This course introduces the master's students to the medical and health profession education as a science and how it evolved over the last few decades. The students will identify the most important milestones and the hot issues related to medical and health professions education definitions of the common terms and explanation of some important concepts. Additionally, students will explore current issues that affect teaching and learning in the medical and health professions education context. As well, students will explore how the dynamic and ever-changing nature of medicine necessitates change in

the way we educate physicians and how to equip them with the necessary skills to respond effectively to varying patient needs; like providing ongoing patient management; health education, management, and leadership skills.

MHE-612 Planning, Management, and Governance in MHPE

This course has been developed to allow professionals who take management responsibility to develop their skills and understanding of theories of management and their application in medical and health professions education. The course also addresses different organizational structures in the medical and health professions education context. Concepts of educational planning, management, and governance related to organizational structure, and human resource management will be discussed, and various planning processes, management strategies, and governance approaches are studied with attention to contextual adaptation. Students will explore theories surrounding planning, management, and governance and relate them directly to the contemporary educational healthcare environment where they work. They will take part in group tasks, explore their management style, and reflect on themselves and how they relate to and motivate others.

MHE-613 Principle of Teaching and Learning I

This course introduces students to learning theories and their relevance to current teaching and learning methods in medical and health profession education. In addition, it deepens their insight into historical foundations, the important milestones and modern principles and concepts of teaching and learning. Additionally, students will explore the classical

origin and philosophical backgrounds of contemporary learning theories and to what extent the current theory and practice are rooted in behaviorist, cognitivist, and constructivist psychological perspectives.

MHE-614 Principles of Teaching and Learning II

This course focuses on equipping students with the competencies to apply the principles of teaching and learning in medical and health professions

education. Students will study the different learning domains (Cognitive, Affective, and Psychomotor) and the teaching and learning methods used for teaching/learning in each domain. Moreover, students will study cognitive functions and learning, memory, information processing, problem-solving, and creativity. Students will also study the principles of adult learning and their application in medical and health profession education and the differences between instructor-focused and student-focused teaching. The course includes approaches to the foundation of small and large group learning and large class learning and the micro-skills in facilitating small group learning, both intra-team and inter-teams. This course will also provide students with the theoretical background and the knowledge/application of interprofessional education within the medical and health professions education.

MHE-615 Curriculum and Course Design

This course helps the students to apply major perspectives on curriculum design, reform and renewal through different approaches and models adopted in medical and health professions education. This course equips the student with the necessary skills and competencies in designing, developing, and evaluating a curriculum. It is designed to assist the student to understand and apply different methods of curriculum design/development including the Kern's Six-step Approach to Curriculum Development: Problem identification and general needs assessment, targeted needs assessment, goals and objectives, educational strategies, implementation and evaluation and feedback. Students will also learn how to write SMART course learning outcomes using contemporary frameworks and taxonomies. They will also learn how to use these frameworks and taxonomies to select/create the appropriate assessment tools and instruction methods for each one of the course learning outcomes. Modern practices in curriculum/course design and their effects on learning are also addressed in this course including designing courses using a significant learning approach (backward course design approach). A systematic multi-step process for curriculum development, with student projects implementing the steps, is used throughout the Course.

Semester Two:

MHE- 621 Community Oriented Education and Social Accountability

This course introduces students to community-oriented education and its importance. Students will explore how and why community-oriented education is increasingly prioritized in health professions education curricula in current practice. They will also explore the teaching and learning approaches in primary care facilities and community settings, which is now considered a very common aspect of most medical training. In addition, in this course, students will explore the Social Accountability Concept, which is considered a relatively new direction in health professions education. They will also explore the 10 strategic directions for social accountability in the Global Consensus for Social Accountability of Medical Schools and the importance of being engaged, and responding to the needs of their communities, regions, and nation

MHE- 622 Instructional Methods in MHPE

This course covers the most commonly used instructional methods in the classroom, clinical settings and community settings in medical and health professions education. Students will use educational taxonomies for the creation of instructional learning outcomes for different learning domains and to select the appropriate instructional methods to cover and learn them effectively. Students will apply the principles of learning theories in planning, designing, and implementing effective instructions in small groups and large class settings using a variety of procedures, materials, and technologies. Additionally, the student is challenged to design educational interventions with sensitive, relevant, hands-on experience, based on theoretical principles. Students will also learn how to integrate assessment with teaching and learning processes to make instructions more effective and engaging and appealing to students. Topics include effective speaking, use of technology in the classroom, creation of interactive presentations, creating dynamic learning environments.

MHE-623 Collaborative Learning in MHPE

This course introduces students to contemporary collaborative learning methods in medical and health profession education, with focus on Problem-based Learning (PBL), Team-based Learning (TBL) and Case-based Collaborative Learning (CBCL). Students will apply theories of learning, communication skills, and teamwork and as well, they will learn to integrate digital technologies in teaching and learning processes and make it more engaging to learners in medical and health professions context. Students will learn how to collaborate with each other in peer-to-peer, small groups or in large groups settings to discuss concepts and/or find solutions to different teaching and learning problems. Students will also learn how to effectively plan, implement, and evaluate a collaborative learning session for pairs, small groups, or large class settings. They will also explore the main three steps involved in process of in-class collaborative learning activities and why educational experiences that are active, social, contextual, engaging, and student-owned lead to deeper learning compared to traditional methods of teaching and learning

MHE-624 Simulation, Technology and Innovation in MHPE

This course combines evidence-based medicine with technologically advanced simulation-based medical and health professions education techniques. The course content focus on the evidence-based practice in simulation based medical and health professions education as a learning tool designed to develop knowledge, skills, and experience in order to enhance the achievement of learning outcomes and enhancing patient safety. It will equip the educators with a critical understanding of how simulation can be used to enhance teaching, learning and assessment in the field of medical and health professions education. The learner will be able to explore characteristics of simulations, from low tech to high fidelity, and their use in a variety of settings in medical and health professions education. Students will examine the use of simulation as an instructional and assessment tool in medical and health professions education. Students will explore the learning effectiveness of simulation, evaluate simulation methodologies. Students will develop a simula-

tion teaching and/or assessment project. This course provides an overview of the field of educational technology. The course will provide students with an understanding of the role various forms of electronic and digital technology in the teaching/learning process and to use them to enhance students' engagement in learning. This course also tackles topics, like technology-assisted strategies, advanced clinical teaching, and evaluation of learning experiences, to achieve its objectives. The course emphasizes online course designing, teaching strategies, and their use to achieve the intended learning outcomes.

MHE- 625 Research and Scholarship

This course brings to the learner a common understanding of both the generic features of research and the unique features that define research in medical and health professions education. The learner will receive hands-on experience in planning and conducting medical and health professions education research drawing from quantitative, qualitative, and mixed-method research. It will also enhance the awareness of students to their role in advancement of health profession education and their practice. Additionally, this course helps medical and health educators to define and find examples of different types of scholarship in medical and health professions education (HPE) and how to be a scholar in health professions education. Students will also evaluate works of scholarship in education, based on standards of scholarship including clear goals, adequate preparation, appropriate methods, significant results, and reflective critique.

Semester Three:

MHE-631 Assessment and Evaluation in MHPE

Understanding the principles of assessment of learning is important for the development of appropriate assessment strategies. This course provides an overview of the basic concepts and terminologies used in student assessment and evaluation, including definitions, principles, importance, purpose, types of assessment, and criteria of good assessment tools. It also equips students with the necessary skills to craft an assessment plan for a program or a course

and how to implement it using different models of assessment that need to be used in assessing basic and clinical sciences. Students will also explore different types of exam tools/questions that are now in use in medical and health profession education. Basic principles of test construction, blueprinting, standards setting, marking using rubrics, effective feedback and assessment methods, management of the program assessment systems, and related statistics are covered in course. Students will learn how to create authentic assessments within a health profession's education. Assessment tools covered in depth in this course include MCQ, Extended Multiple Choice, Modified Essay Questions, Short Essay Questions, Short Answer Questions, OSPE and OSCE. Students will discuss the issues of reliability, validity, and difficulty level, discrimination indices and differences between criterion-referenced and norm-referenced grading, and adjusting, reporting and interpreting exam results.

MHE-632 Quality Assurance, Accreditation

This course gives students an overview of quality assurance, control, and management in health professions education. This course focuses on the history and evolution of quality, its terms, principles, theories, and practices. The course will also cover quality assessment and improvement processes and provide a basis for developing skills in fulfilling accreditation requirements. The course outlines quality improvement and the accreditation bodies, its standards, and criteria. It also discusses the processes relevant to the local institution and program contexts. These are matched with the external quality assurance and accreditation processes adopted by national and international accreditation bodies and organizations. As accreditation of health professions institutes and programs is relatively new in the region, special training in this area will be provided to students; including the processes related to key performance indicators, accreditation standards and procedures and to be fulfilled adequately.

This course also gives students an overview of major program evaluation approaches which is considered a very crucial step for quality assurance and improvement of program/curriculum in medical and health professions insti-

tutes. Students will learn and apply evaluation concepts, principles, and standards. An actual evaluation plan will be developed by each student, including inquiry methodologies, data sources, collection strategies, timetables, and budgetary plans, along with analysis, interpretation, and reporting strategies. Efforts will be made to incorporate students' real-life scenarios in evaluation planning and projects. There will be an explanation of the techniques and procedures used in program evaluation, self-evaluation studies, and external review of programs.

MHE-633 Faculty Enhancement

The course helps the students to define a broad range of activities designed to prepare and assist faculty members in various positions and career stages for their academic roles and responsibilities of teaching, research, and administration. Students will explore a variety of strategies for faculty development, including peer coaching, mentoring, courses and other structured activities like workshops and seminars. It will also equip medical and health professions educators with the necessary skills to plan, implement, monitor, and evaluate different faculty development programs (Courses, workshops, Seminar series, Portfolio Development). Students will learn how to conduct and analyze faculty need assessment surveys and different forms of evaluation of the faculty development programs. They will learn how to follow-up, and document an educational program and progress. Students' real-life scenarios will be used to identify individual priorities.

MHE-635 Leadership and Change Management in MHPE

This course aims at preparing medical and health professions educators to build their skills as effective leaders in educating future generations and leading their institutes through the change process to a better status. The course will enable students to develop an understanding of key issues in the leadership of change in medical and health professions education. It will focus on several change leadership topics including change theories, established models of change, drivers of change, the human dimension of change and incremental versus transformational change. Additionally, the course will enable

them to understand the multi-faceted nature of leadership models/styles and describe their approach to it. It will also enable them to overcome obstacles and motivate others to embrace changes and sustain development within their work settings.

Semester Four:

MHE-641: Graduation project: Candidates Submitting and Defending a Dissertation

Instructional Methods and Tools

1. Duration of the program

- Four Semesters = 60 weeks
- Total Credit Hours = 42

2. Instructional Tools

In an interactive and dynamic learning environment, an integration of various methods of evidence-based teaching methods and approaches is used.

- Problem-based learning (PBL)
- Competency-based learning (CBL)
- Team-based learning (TBL)
- Simulation-based learning
- Flipped-classroom (FC).
- Case-based learning
- Task-based learning
- Seminar
- Tutorials

- Workshops
 - Lecture-based learning LBL
 - E-learning formats
3. Language of Instruction
- English

Assessment and Evaluation

- Examinations Regulations: Procedures and Conditions

Students must abide by examination rules and regulations set by the Faculty of Graduate Studies of the National University-Sudan

- Assessment tools

Students assessed by:

- Assignments
- Discussion forums (posts and effective interactions)
- Seminars/ Presentations (individuals and groups)
- Case studies
- Projects
- Reports
- Written exam composed of type A multiple-choice questions, extended matching questions EMQ, structured short answers short questions, etc)
- To ensure the Validity and Reliability of the assessment system, student work is planned based on a structured blueprint, marked against specific criteria (using structured rubrics), and provided to students in timely feedback.

Program Evaluation

A systematic process of program evaluation is structured throughout the program for planning, documenting, and assessing the implementation and outcomes of the master program to ensure the effectiveness of the program and identify potential areas for improvement.

The program is evaluated through surveys, reports, small group discussions, and direct interviews with stakeholders (students, facilitators, administrators, external examiners, etc.).

Grading System

A+ (90-100) A (80-89) B+ (75-79) B (70-74) C+ (65-69) C (60-64) F (<60)

Award of the Degree

The Scientific Council of the National University-Sudan, based on the recommendation of the Board of the Faculty of Graduate Studies shall award the successful candidate

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