Educational Development Centre
For Health Professions
University of Khartoum
Faculty of Medicine

A proposed Program for Diploma/ Master in Health Profession Education by
Course and Research

1) Introduction:
The Educational Development Centre for Health Professions (EDC) at the Faculty of Medicine, University of Khartoum (U of K) had started to function as a unit in 1976 and established as a centre in 1980. The EDC had offered various training programs for health profession cadres, such as curriculum and course design, teaching and learning, assessment and evaluation. Training in research methodology, consultation on curricular development, innovative methods for student support, training of community members in first aid and advance life support were also offered. EDC in collaboration with World Health Organization (WHO) had offered certificates on health professional training for leaders of allied sciences (midwifery, nursing and medical assistance) from Yemen, Somalia and Sudan. EDC had successfully conducted three international conferences on medical education. EDC has enjoyed regional and international reputation for professional excellence as WHO collaborative centre for health professional education.

Over the last few decades, the quality of education and training of medical and health care professionals has improved significantly through a succession of educational and training advances. These have included among others, planning of educational programmes by objectives and learning outcomes, problem based learning, multi-professional teams training, social accountability, community based training, learner-centred approach, faculty development, educational research. More recently, extensive utilization of informatics and the internet technology were introduced. Currently, self-evaluation and accreditation of educational institutions have been considered vital to improve the quality of teaching and learning programs. All these changes made it
necessary to take measures to improve the medical and health professionals’ quality in medical education. As consequence, EDC is proposing a programme for Diploma/Master in health profession education to meet the increasing demands in this field.

2) Rationale:

- **Community needs**: excellence in service delivery by graduating competent health personnel who are well taught and trained.
- **Health profession educator**: demands for good teachers and trainers to cope with the expanding numbers of teaching institutes in medicine and health sciences.
- **Health institution**: need for competent teachers trained in medical education to set programs for staff and curriculum development.
- **Health profession personnel**: need to raise the capacity of health profession graduates to cope with the dramatic advances in the quality of education, training and in the field of innovative research.

3) Objectives:

The programme aims at:

- Raising the awareness of medical and health professions’ educators on advanced principles of medical education.
- Acquiring skills needed to enable the graduates to play their role effectively in medical education planning, learning, assessment and educational technology.
- Enabling the graduates to generate and analyse information on different aspects of health professions education through research leading to create data base that help in reform and planning.

4) Intended Learning outcome of the program:

i) **Knowledge**:
   a) Knowledge, comprehension
   b) Cognitive Skills

ii) **Skills**
a) Subject specific Skills
b) Generic skills

5) The Programme Design:

a) The programme is based on the semester and credit hour system.

b) The programme consists of three semesters with two levels of certifications.

1) Diploma in health profession education, upon successful completion of semesters one and two.
   (If a candidate is registered for the Diploma course only, he can’t continue to the Master course unless he spends two years after the diploma and provide evidence that he spent these two years active in medical education. He must also have scored at least 65% in the diploma course.

2) Master in health profession education, upon successful completion of semester three. At least 65% must be scored in the diploma course before the candidate is allowed to proceed to the master degree course.

   c) The pattern of learning is face- to- face facilitation, open learning and distance learning. (At least 30% of the program duration must be face to face facilitation)

6) Admission Requirements:

   • According to U of K Graduate College Regulations.

   • Medical and health sciences graduates holders of MBBS or BSc will be eligible to register for the program.

7) Available Facilities:

   a) Teaching staff

   • Medical Sciences and Health Campus U of K.
      - Three professors
      - Two associate professors
      - Four assistant professors

   • Resource experts from University of Khartoum
      - Faculty of Education
- Faculty of Mathematical science.
- Staff from other universities
  - Three professors
  - Three associate professor
  - Six assistant professors

b) Supporting Institutions
1. World Health Organization (WHO), EDC is WHO collaborative centre for Human resources development Since 1998.
2. Open University Centre for Education in Medicine, London, UK.
3. The Medical Education unit at Dundee University in UK and Association of Medical Education in Europe (AMEE).

C) Infrastructure.

1. Lecture halls: one major lecture hall.
2. Two skills laboratories.
3. Computer Laboratory fully connected to the internet. It is also used as an alternative lecture hall, as well as a space for small group work.
4. Graphic Design & Audio-visual Unit
5. Library

8) Course Structure:

The programme for Diploma/master of Health Profession Education (DMHE) is made of 13 modules. The modules are distributed in three semesters and have a total of 45 credit hours. It includes a research paper for the Diploma of Health Profession Education and a research project as partial fulfilment for the Master of Health Profession Education. The modules have different activities ranging from interactive lectures, small group teaching, small group work, assignment and presentations. Some material will be conducted online and some group work will also be conducted as online forums.
In the first semester, the modules will include the basic principles and techniques of the major areas of medical education. The second semester modules will deal with advanced issues in the educational environment, technology & quality management. The third semester module will deal with leadership, technology, and a research in medical education for partial fulfilment. The research project will be conducted during the third semester.

(Table 1) Semester 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Module</th>
<th>Credit Hours</th>
<th>Theory</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMHE 511</td>
<td>Curriculum Development &amp; Course Design</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>DMHE 512</td>
<td>Teaching &amp; Learning</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>DMHE 513</td>
<td>Assessment &amp; Evaluation</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>DMHE 514</td>
<td>Research Methodology (I)</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>Credit Hours</td>
<td>15</td>
<td>9</td>
<td>6</td>
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(Table 2) Semester 2

<table>
<thead>
<tr>
<th>Code</th>
<th>Module</th>
<th>Credit Hours</th>
<th>Theory</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMHE 521</td>
<td>Educational Technology</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
| DMHE 522 | Quality Assurance 
Self-Assessment & Accreditation          | 4            | 2      | 2         |
| DMHE 523 | Student's Support                                  | 3            | 2      | 1         |
| DMHE 524 | Research Methodology (II)                          | 2            | 1      | 1         |
| DMHE 525 | Research Ethics (1)                                | 1            | 1      | --        |
| Total    | Credit Hours                                       | 15           | 8      | 7         |
(Table 3) Semester 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Module</th>
<th>Credit Hours</th>
<th>Theory</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMHE 631</td>
<td>Research Ethics (2)</td>
<td>1</td>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>DMHE 632</td>
<td>Educational Management &amp; Leadership</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>DMHE 633</td>
<td>Advanced Technology Assisted Research/Education</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>DMHE 634</td>
<td>Research Project</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>15</td>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

9) Instruction language
- English

10) Teaching strategies:
The programme modules are organized in a way that allows maximum learner-learner & learner-facilitator interaction as well as maximizing student-centeredness, independent learning and effective utilization of information technology. The modules in each semester will be run in parallel and the learning activities will include:
- Interactive lectures addressing the principles and concepts in the modules
- Assignments in which students will be asked to prepare for tutorials, seminars & written reports (mainly about their own experiences and situational analyses in their institutions)
- Tutorials & seminars which are learner-lead & tutor-facilitated
- Task-based small group work in which groups of candidates work to achieve a task.
- Contribution in medical education workshops as facilitators and co-facilitators
• Online & computer-based activities in which the candidates will either use them as interactive tutorials or as complementary material to be used for the assignments.
• A research project for partial fulfilment that starts early & continues throughout the programme.

11) Assessment Strategy:
In Accordance with the post graduate regulations the candidates’ achievement & performance will be assessed using a battery of instruments, tools and approaches which include:
1- The assessment of:
   • Assignments & group work.
   • Online & computer-based activities
   • Contribution in medical education workshops
   • The research project
2- Final end-of-module examinations.
3- Supplementary and dismissal are in accordance with general rules of the graduate college.

12) Degree Award:
The Senate of the University of Khartoum upon recommendation of the Graduate College Board shall award the following degrees:
• The Diploma in health profession education to candidates with successful completion of semester one and two.
• The Master of health profession education to candidates after successful completion of semester three.

13) Programme Evaluation & Improvement:
• The programme will be continuously monitored using candidates feedback and self-evaluation by facilitators. The necessary improvement and modifications will be introduced as the programme proceeds.
• The programme will also be evaluated & reviewed annually using formal techniques & procedures.
• External evaluation by external examiners and external teachers for the purpose of international recognition & accreditation.

Learning Objectives and Learning Outcomes of the educational Units

DMHE 511: Curriculum Development and Course Design
Upon completion of the modules, participants will be able to:
• Define the terms: aims, goals, outcomes and enabling objectives.
• Define Bloom’s taxonomy of educational adjectives.
• Define the terms curriculum development course and course design.
• Explain the process of course design.
• Conduct situational analysis for a unit in an educational program.
• Explain the SPICES model of medical education
• Explain the need for, and the principles of educational prioritization
• Conduct an educational prioritization analysis for course content.

DMHE 512: Teaching and learning
Upon completion of the modules, participants will be able to:
• Explain principles of teaching & learning
• Define learning situations & approaches
• Manage large groups teaching.
• Conduct small groups teaching sessions
• Facilitate problem-based learning
• Conduct an effective bedside teaching session

DMHE 513: Assessment& Evaluation
Upon completion of the modules, participants will be able to:
• Define the principles of students’ assessment.
• Make a blueprint for assessment of student’s achievement
• Build multiple choice questions (MCQ)
• Prepare and conduct the various objective practical examinations:
  Spot examination (SE), objective structured practical examinations (OSPE)
  And objective structured clinical examinations (OSCE)
• Apply the various standard setting & grading methods
• Analyse and interpret examination results.

DMHE 514: Research methodology I
Upon completion of the modules, participants will be able to:
• Define the principles of scientific research
• Define and describe the various study designs used in health research
• Calculate the appropriate sample size for the proposed study
• Identify areas research in medical education
• Conduct a study that sheds light on an educational principles
• Conduct a review that summarizes the best evidence for an educational principle
• Conduct data search
• Describe the main features of scientific documents (reports, papers, theses, dissertations & books)

DMHE 521: Educational Technology
Upon completion of the modules, participants will be able to:
• Utilize e-learning techniques
• Acquire the Advanced presentation skills
• Define and describe learning/course management systems
• Apply the instructional design technique.
• Produce and prepare different teaching materials.
• Facilitate face to face and on-line interactive sessions
• Prepare and conduct computer-based examinations

DMHE 522: Quality assurance, Self-assessment & Accreditation
Upon completion of the modules, participants will be able to:
• Describe the main principles of quality and excellence in medical education
• Explain the main procedures used in assessing quality education in various medical schools.
• Describe the main domains of evaluation and accreditation of medical schools.
• Apply the procedures used during self-evaluation and accreditation of medical schools.

DMHE 523: Student’s Support
Upon completion of the modules, participants will be able to:
• Describe the main principles of student support.
• Identify the various roles played by a faculty to support student.
• Explain the concept of monitoring and evaluation.
• Act as a career adviser.
• Carry out the various roles of a student advisor.

DMHE 524: Research Methodology II
Upon completion of the semester, each participant would have selected a research topic in the field of medical education, planned for it, conducted it & produced a report.

DMHE 525: Research Ethics 1
Upon completion of the modules, participants will be able to:
• Know History and Principles of Research Ethics
• Describe the importance of research ethics in human subject
• Describe the importance of international and national guidelines in protecting human subjects
• List the specific requirements for ethical research
• Identify risks and benefits
• Understand principles of informed consent and write an informed consent form for a provided protocol.
• Describes types of research misconduct
• Describe different categories for research review
• Identify vulnerability issues while reviewing protocols
• Explain roles of research ethics committees

DMHE 631: Research Ethics 2
Upon completion of the modules, participants will be able to:
• Explain therapeutic misconception
• Explain coercion and undue inducement
• Perform an ethical review of research protocols.
• Understand investigational new drug applications and identify ethical issues in phase I, II and III clinical trials.
• Explain relationship between authorship and accountability
• Identify conflict of interests and how it could be handled
• Identify ethical issues in tissue sample research
• Identify ethical issues that can rise during collaborative research in developing countries.

DMHE 632: Educational Management & Leadership
Upon completion of the modules, participants will be able to:
• Acquire the skills for leading and managing educational innovations and improvements.
• Appreciate the importance of continuing professional development for staff.
• Acquire the skills for efficient finance and resource management.
• Appreciate team work conflict resolution.
• Acquire personal skills such as time and stress management and action planning

DMHE 633: Advanced Technology Assisted Research/ Education:
Upon completion of the modules, participants will be able to:
• Formulate a research question & a hypothesis
• Search for literature electronically and manage references using citation & reference managers
• Define and describe the various study designs used in health research
• Use computer software to calculate the sample size & to randomize selection & allocation
• Compile a winning research proposal
• Define the main statistical concepts and tests used in health research
• Discuss the selection and use of measures for central tendency desperation, frequency distributions and the selection of appropriate descriptive statistics.
• Analyse data using the various statistical tests
• Analyse data & produce tables & graphs using computer software
• Recognize different types of scientific publications
• Recognize the international requirements for scientific publications
• Assess a scientific publication
• Prepare a scientific publication
• Give a presentation in a conference

DMHE 634: Research Project

Upon completion of the semester, each participant would have selected a research project in the field of medical education, planned, conducted and produce a dissertation as partial fulfilment for the Master of Health Profession Education.