



Ministry of National Health Services

Regulation & Coordination, Government of Pakistan

Health Services Academy (DAI), Islamabad

Collaboration with

Institute of Allied Medical Professions (IAMP)

DIPLOMA IN DIAGNOSTICS MEDICAL SONOGRAPHY (DMS)

Diploma In Diagnostics Medical Sonography (DMS)

Executive Summary:

The Diploma 02 years programs in Allied Health Sciences have been uniquely positioned to educate and equip highly qualified health care professionals committed to fulfilling the mission of improving the health and well-being of individuals and communities.

The Diploma in Diagnostic Medical Sonography (DMS) is one of the emerging areas of Allied Health Science revolutionized the way medical professionals diagnose diseases and detect abnormalities. It provides the medical community with the means to diagnose diseases without injections of radioactive material, making incisions, or introducing radiation to the patient. Diagnostic Medical Sonography (ultrasonography) is a medical technology using highly sophisticated, computer driven imaging devices to produce dynamic multi-dimensional visual images of organs, tissue, and blood flow.

As a radiation-free medical imaging modality, it provides important clinical information for the diagnosis and treatment of patients. The DMS Diploma holders shall work and contribute as a part of a medical team, which includes physicians, consultant, paramedics, and other healthcare professionals who provide essential clinical information that is used to plan treatment and patients care.

This Diploma DMS program will be based on structured training on normal and abnormal anatomy, physiology, and patient care, along with instrumentation usage and diagnostic techniques for more accuracy in clinical diagnosis and results. Due to the rapid, widespread acceptance of ultrasound as an imaging modality, a shortage of educated Sonographer has been created nationwide. There are several areas of specialization in the field of sonography which include obstetrics/gynecology, abdomen, echocardiography, Breast, and pediatric sonography. This technically challenging, patient focused field demands that sonographers demonstrate a high level of decision making, diagnostic responsibility and critical thinking skills. Sonographers usually have extensive direct patient contact which includes performing invasive procedures and providing solutions for better treatment to eradicate the patients' diseases and its dangerous life-threatening effects in all critical illnesses.

Modern Medical Diagnostic Sonography (DMS) is a highly diversified and vast field consisting of such diverse areas such as – Diagnostic Radiology, Interventional Radiology, Radiation Therapy and Nuclear Medicine. It is non-invasive Ultrasound as they are commonly called, work in all these areas commonly of Sonographers discharging their duties often at tertiary level medical center's, teaching hospitals and academic research centers. These highly trained and specialized professionals work with patients undergoing procedures, they are a key part of health care delivery teams in any modern hospital set up. Diploma in Diagnostic Medical Sonography (DMS) is milestone in their career.

Career Opportunities and Global Prospects After completing Diploma in Diagnostic Medical Sonography (DMS) eligibility to appear in Registry Examination ARDMS can work in one of the specialty independent rural and remote area in Pakistan as well better job prospectus around the world.

Duration The enrolled batch of Diploma in Diagnostic Medical Sonography (DMS) Program shall complete its degree in **02 years** comprising **04 semesters**.

The students shall be benefited from with varied curriculum that also include didactic clinical experience component to be catered **from university affiliated Diagnostic and Research Training Centre / affiliated with Health Services Academy (DAI) with DHQ or private Medical Centre's**.

Professional Fields: For professional fields, the disciplinary requirements will be developed by the departments concerned in collaboration with the professional associations or learned councils.

THE TWO-YEAR DIPLOMA (as per rules of Allied Health professions Council) Act 2022

- **Transition to Semester System:** All HEIs offering the two-year Diploma in Diagnostic Medical Sonography will transition to the semester system per AHPC policy and guidelines. Act 2022
- **Overall:** Within the requirements given in the Framework (Section II above), to obtain Diploma in Diagnostic Medical Sonography (DMS), students will have to complete the following:
- **Credits per Semester:** Ordinarily, students will complete **12-13 credits** in every semester by taking five courses of 03 credits each, or other combinations. However, a student may take more or fewer courses in a semester with permission in writing of the competent authority as specified in the rules.
- **Disciplinary Requirement:** The disciplinary course offerings for DMS will be determined by the award of the Diploma Health Services Academy (DAI) federal Charter Act 2018.
- **Practical Learning Requirement:** Students of DMS programs will have to fulfill a modified version of the Practical Learning requirement specified in Section VII below. The special provisions pertaining to Diploma in DMS students are as follows:

PLL : Practical Learning Requirement: Diploma in Diagnostic Medical Sonography students will be allowed to fulfill the PLL requirement by signing up for an extracurricular “lab” of 4 hours a week for 2 semesters. A Diploma from the DMS program.

- Total numbers of Credit hours **39 + 8 = 47** Credit Hours
- Duration Course work Diploma **02 years**
- Semester duration **16-18 weeks Semesters: 04**
- Course Load per Semester **10-14 Cr Hrs.**
- Average number of **courses per semester 04**
- (Not more than 3 lab/practical courses/semester)

Sonographer Certification

RDMS® Registered Diagnostic Medical Sonographer

RDMS® Registered Diagnostic Medical Sonographer

RVT ® Registered Vascular Technology Cardiac Sonographer

Scheme of Studies
Diploma In Diagnostics Medical Sonography (D.M.S)

Prerequisite		09
Course Code	Course Name	Credit Hours
DMP 401	Fundamental Medical Physics	3 (3,0)
MTH 402	Fundamental Calculus	3 (3,0)
SDP 403	Standard of DICOM & PACS, HIPPA	3 (3,0)
Total		09

Baics Health Sciences Courses (04)

		16
Course Code	Course Name	Credit Hours
DMS 201	Basic Anatomy	4 (3,1)
DMS 202	Basic Physiology	4 (3,1)
DMS 203	Basic Pathology	4 (3,1)
DMS 204	Basic Abdominal Sonographic Anatomy and Protocol	4 (3,1)
Total		16

Core Courses: 04

		14
Course Code	Course Name	Credit Hours
DMS 301	Introduction to Diagnostic Medical Sonography	3 (3,0)
DMS 302	Sonography Physics and Instrumentation	3 (3,0)
DMS 303	Abdominal Sonography	4 (3,1)
DMS 304	Obstetrical and Gynecological Sonography	4 (3,0)
Total		14

Practicum (One Specialty) (02)

		08
Course Code	Course Name	Credit Hours
DMS 101	Patient Care and Ethics (Mandatory)	4 (1,3)
DMS 130	Pelvic Sonography	4 (1,3)
DMS 140	Abdominal Sonography	4 (1,3)
DMS 160	Trimester Obstetric Sonography (1,2,3)	4 (1,3)
Total		12

Total No. of Courses of the Program	=	12
Total No. of Credit Hours of the Program including Clinical	=	39+4 =43
Total No. of Credit Hours Training: (Credits Hours 3)	=	04

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Schedule of courses (Semester Wise)
POST GRADUTE
Diploma In Diagnostics Medical Sonography (D.M.S)

Semester-I

Course Code	Course Name	Credit Hours
DMS 201	Basic Anatomy	4 (3,1)
DMS 202	Basic Physiology	4 (3,1)
DMS 301	Introduction to Diagnostic Medical Sonography	3 (3,0)
Prerequisite		
DMP 401	Fundamental Medical Physics	3 (3,0)
Total		14

Semester-II

Course Code	Course Name	Credit Hours
DMS 203	Basic Pathology	4 (3,1)
DMS 302	Sonography Physics and Instrumentation	3 (3,0)
Prerequisite		
MTH 402	Fundamental Calculus	3 (3,0)
SDP 403	Standard of DICOM & PACS, HIPPA	3 (3,0)
Total		13

Semester-III

Course Code	Course Name	Credit Hours
DMS 204	Basic Abdominal Sonographic Anatomy and Protocol	4 (3,1)
DMS 303	Abdominal Sonography	4 (3,1)
DMS 304	Obstetrical and Gynecological Sonography	4 (3,0)
Total		12

Semester-IV

Course Code	Course Name	Credit Hours
DMS 101	Patient Care and Ethics (Mandatory)	4 (1,3)
--	Practicum (One Specialty) (01)	4 (1,3)
Total		08

Fee Structure for

Diploma In Diagnostics Medical Sonography (D.M.S)

(24 months)/ 04 Semesters (47 Credit Hours)

Sr. No.	Particulars	Category	Amount (PAK. RS)
1	Admission Processing Charges	One Time	5000
2	Admission Fee	One Time	20,000
PER SEMASTER FEE			
3	Tuition Fee	Per Semester	100,000
4	Course Registration Fee	Per Semester	30,000
5	Examination Fee	Per Semester	20,000

Note: Per Semester fee is subject to revision.



**ALLIED HEALTH PROFESSIONALS' COUNCIL
GOVERNMENT OF PAKISTAN**

Ministry of National Health Services Regulations & Coordination

It is hereby enacted as follows:—

1. Short title, extent commencement.— **(1) This Act shall be called the Allied Health Professionals Council Act, 2022.**

(2) It shall extend to the whole of Pakistan.

(3) It shall come into force at once.

2. **Definitions.**— (1) In this Act, unless there is anything repugnant in the context or subject,—

“Allied Health Professionals” or “AHP” means Person who provides diagnostic, therapeutic, Preventive, curative or rehabilitative services in health care, in a prescribed Manner and has undergone a prescribed course of training in a recognized institution. And is registered as an Allied Health Professional by the body formed. for the purpose, as per Schedule-I.

(b) **“bachelor’s degree”** means any degree, duly recognized by the council, of **at least four years duration after higher secondary school granted by a university or an institution.**

(c) **“basic qualification”** means certificate or diploma course for Allied Health Professionals recognized by the council.

(d) **“certificate”** means any recognized qualification pursuant to at least a one-year training duration granted by an institution recognized by the Council.

(e) Council means the Allied Health Professionals Council established under section 3.

(f) **“continuous professional development”** means skill enhancement and improvement of personal and professional competency which shall-

(i) Comprise of lectures, seminars, courses, individual study, or other activities undertaken by a Registered AHP; and (ii) reasonably be expected to advance a Registered AHP’s development in his or her related profession.

(g) **“continuous professional development opportunity provider”** means an institution or organization providing continuous professional development opportunities recognized by the council

(h) **“diploma”** means **any recognized qualification of at least two years or greater duration granted by an institution recognized by the Council to grant such qualification under this act.**

(i) “**doctorate degree**” means any degree higher than an M. Phil or master’s degree, recognized by the Higher Education Commission of Pakistan and which is recognized by the council as applicable towards qualifications of an AHP.

(j) “**eligible**” means any person eligible for registration of recognized qualification under this act.

(k) “**Ex-officio member**” means members of the Council nominated under clauses (a) and (b) of sub-section 3 of section 3 of this Act and who shall not have the right to vote or hold any elected position in the Council.

(l) “**healthcare establishment**” means any premises used or intended to be used for the provision of health care services, including but not limited to a hospital, teaching hospital, rural health center, basic health units, surgical centers, blood banks, maternity homes, nursing homes, clinics, clinical laboratories, dispensaries, dental clinics, x-ray laboratories, diagnostic center, centers for nuclear medicine or radiation therapy, ambulatories, psychiatric hospitals, burn units, psychiatric nursing homes, community mental health center, hemodialysis center, dialysis center, rehabilitation center or clinic or centers and such other health care or premises as may be declared from time to time by the Federal or Provincial Government or bylaw.

(m) “**Higher qualification**” means a bachelor’s degree or higher qualification as recognized by the Council for AHP.

(n) “**institution**” means an institute, college or university which is recognized under this act to grant or train basic or higher. qualification for AHP.

(o) “**master’s degree**” means any post graduate degree granted by a university or an institution recognized by the Council.

(p) “**Member**” means a member of the Allied Health Professionals Council.

(q) “**M. Phil**” means any post-master’s degree granted by a university or an institution recognized by the Council. “(r) “**National Medical Authority**” means the Authority constituted. under section 15 of the Pakistan Medical Commission Act, 2020.

(s) “**Prescribed**” means prescribed by rule or regulation.

(t) “**Recognized Qualification**” include:

(i) a **basic qualification for AHP** recognized by the council; or

(ii) a **higher qualification for AHP** recognized by the council; or

(iii) a basic or higher qualification for AHP which was registered under any law, before the commencement of this Act, which shall be considered as a recognized qualification.

(u) “**List of disciplines**” categorized as allied health professional will be as included, added or notified by the concerned administrative division or Ministry, in Schedule-I to this Act; and shall include disciplines that are formally taught by a recognized institution and are related to patient care.

17. Licensing and Rights of Licensees.— (1) The Council shall conduct not less than twice each year a licensing exam for each of the disciplines listed in Schedule-I.

The exam shall be developed by the relevant advisory committee of the discipline.

(2) Any person having acquired a qualification recognized by the Council under this Act shall have the right to take the licensing exam.

(3) All AHP's who qualify the licensing exam shall be granted a license to practice by the Council and entered in the register of AHP's

(4) A registered and licensed AHP shall have the following privileges, namely:—

(a) entitled to practice in their discipline subject to the prescribed code of conduct and terms of practice.

(b) entitled to hold appointment in his field in any public or private health care establishment.

(c) registered AHP having basic qualification and valid registration shall be entitled to take admission in higher qualification courses; and (d) eligible to become a member of the Council under this Act