MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)
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Value Added Course

Computer in Healthcare

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Mahatma Gandhi Mission's
Medical College

Value Added Course
Computer in Healthcare
[Conducted by Dept of Anatomy, MGM Medical College, Aurangabad]

Computers in Healthcare: Minimizing error and smart and swift Healthcare

The goals of medical education are to provide students and graduate clinicians specificfacts and information, to teach strategies for applying this knowledge appropriatelyto the situations that arise in medical practice, and to encourage developmentof skills necessary to acquire new knowledge over a lifetime of practice.

Information technology is an increasinglyimportant tool for accessing and managing medical information—both patientspecificand more general scientific knowledge. Medical educators are aware of theneed for all medical students to learn to use information technology effectively.

Computers also can play a direct role in the education process; students may interact with educational computer programs to acquire factual information and to learn andpractice problem-solving techniques. In addition, practicing physicians may use computersto expand and reinforce their professional skills throughout their careers. Theapplication of computer technology to education is often referred to as **computerassistedlearning, computer-based education (CBE)**, or **computer-aided instruction(CAI)**.

With its vast storage capacity, a computer can bean extension of the student's memory, providing quick access to reference and new content.

Multimedia capabilities allow the computer to present rapidly a much larger numberof images than can be accessed through a book or an atlas and to supplement the static images with sounds, video clips, and interactive teaching modules. Immersiveinterfaces, which present three-dimensional worlds and allow touch and force feedbackthrough a joystick or instrumented glove, promise to support the training environmentof tomorrow.

Ways Computers Are Used in Medicine

Medical Imaging
Medical imaging is a broad term that covers technology used to create images of the human body for study and diagnosis.

Patient Monitoring
Modern computer-based patient monitoring machines allow heart rate, respiratory activity, blood pressure and other critical vital signs to be collected automatically in digital form.

Computer-Assisted Surgery
Computers are used to assist in planning, teaching and performing many surgical procedures.

Networks and Digital Communication
Computer networks and the internet have increased the means of communication between medical professionals with email, instant messaging, video chats and webinars.
Telemedicine
The concept of a house visit is returning to health care in the form of telemedicine.
Electronic Health Records
Perhaps one of the newest major developments in health care, the electronic health record (EHR) is also one of the most far-reaching.
Medical Databases
Computers have brought the development of many useful software solutions in the medical field.
Medical Research
Much of the current research being done into incurable diseases like AIDS and cancer involves the creation of complex computer simulations.
Computers and Hospital Administration
Most hospitals depend heavily on computers and specialized software that handles patient records, supply inventory, personnel scheduling and all the other details required to care for patients.
Uses of Computer in Offices

➢ The typical doctor's office relies heavily on computer technology for day-to-day operations.

➢ Everything from patient scheduling to billing to filing insurance claims takes place through a computer. Many doctors no longer write prescriptions, but instead send a digital prescription from their office computer directly to the patient's pharmacy.

➢ During diagnosis, many doctors consult online databases of medical conditions using a computer instead of looking at a medical book.

Why to learn computer skills:

i. For this acquiring basic computer skill to use it effectively. To minimise error during working, patient care and early diagnosis with integrated approach for management of patient.

ii. To get updated Knowledge and remain as lifelong learner.

iii. To learn easy and swift communication skills such e-communication.

iv. Most important be aware of research and innovation around the world and able to collaborate with various agencies. For that to become effective presenter of project.

'Hence this program to develop paperless hospital in future'

Eligibility:

Medical students (MBBS); MSc; BSc allied health science, Post Graduate and PHD

Course schedule:

Sr. No.	Topic	Theory hrs.	Practical hrs.
1	Introduction to computer application in medical sciences	1 hr.	-
2	Microsoft office & its applications	1 hr.	1 hr.
3	Use of Microsoft word & its application	30 min.	2 hrs.
4	Power point presentation	30 min.	2 hrs.
5	Use of media &Algorithm for PPT	30 min.	2 hrs.
6	Microsoft Excel, concept & analysis of data	1 hr.	2 hrs.
7	Microsoft publisher &Posters/ Banner making	30 min.	30 min.
8	Use of one note (a personal diary)	30 min.	30 min.
9	Application of It in medical research	1 hr.	1 hr.
	Total	6 ½ hrs.	11 hrs.

- Evaluation Method – MCQ Test
- Course will be conducted Three times a year
- Limited Entries (20 students per course)

Books for Reference:

1. David Ingram; Information Technology solutions for Healthcare, Springs.

2. Joan Lambert; MOS 2016 study Guide; Microsoft word, Excel, Powerpoint; Pearson Education, Inc.

3. Russell C Coile; The paperless Hospital; HIMSS

4. Vimla L Patel; Cognitive Information for Biomedicine; Springs.

5. Parvati Dev, Edward Hoffer; Computers in Medical Education.pdf