

M.Sc. Medical Information System

A) Programme Outcomes (POs):

This course would produce trained students which are required in rapidly developing and emerging areas of biosciences, clinical medicine, health sciences, health policies, IPR related activities, drug designing and discovery process. These experts are in continuous demand in clinical research organizations, pharmaceutical industries and hospitals of national and international repute.

B) Course outcomes (COs) :

SEM-I

Paper I: Information Technology in Health Sciences

- CO1. Students will understand basic concepts of computers.
- CO2. Students will be able to discuss details about the computer hardware and software.
- CO3. Describe operating systems and internet related programmes.
- CO4. Understand concept of bio-signal processing and medical imaging
- CO 5. Understand use of computer in health sciences

Paper II: Introduction to Biological Sciences

- CO1: Understand basics of human anatomy and physiology
- CO2: Students will be able to discuss principles of pharmacology
- CO3: Ability to assess disease occurrence through epidemiological studies
- CO4: Students will be able describe carbohydrate, proteins, lipids and nucleic acids
- CO5: Apply knowledge of molecular interactions to assess toxicological studies

Paper III: Medical Informatics

- CO1. Understand genome and early detection of diseases using genome analysis.
- CO2. Students will be able to describe structural biology and drug discovery process
- CO3. Understand virtual screening and computer aided drug designing.
- CO4. Study three-dimensional structures to understand disease mechanism at molecular level
- CO 5. Students will learn various databases and their applications in medical informatics.

Paper IV: German Language A1

- CO 1. Students will be able to understand simple texts, dialogues.
- CO 2. Students will be able to understand numbers, watch timings, weekdays & months.
- CO 3. Students can create correlations between hearing texts and pictures.
- CO 4. Students can understand announcements.
- CO 5. Students can have dialogue in a supermarket, Restaurants.
- CO 6. Students can write short texts, messages.

SEM-II

Paper V: Research Methods and Statistics

- CO1: Students will understand concept of research and methodology.
- CO2: Describe sampling, data collection, data analysis, and report writing
- CO3: Understand hypothesis of research problem and design experiments accordingly
- CO4: Student will able to understand data measurement and statistical data analysis
- CO 5: Understand cleaning of data, coding, and editing

Paper VI: Clinical Data and Quality Management

- CO1: Students will be able to understand clinical research

CO2: Understand case report format and clinical trial protocol

CO3: Ability to assess drug regulatory affairs and approval process

CO4: Students will understand pharmacovigilance and ICH guidelines for clinical trials

CO5: Students will be able to apply information system for hospital management

Paper VII: Clinical Quality Management

CO1: Students will define quality control, quality assurance and total quality management

CO2: Understand quality management tools

CO3: Describe pharmacovigilance systems, guidelines and laws

CO4: Students will understand global perspectives of pharmacovigilance

CO5: Understand drug regulatory authority guidelines and evidence based medicine

Paper VIII: Clinical Data Management

CO1: Students will be able to understand data acquisition

CO2: Understand Clinical Trial Phase wise Data Management

CO3: Ability to assess case report forms

CO4: Students will understand document management, work management systems and NABH
Guidelines for QC and QA

CO5: Students will be able to apply information system for public health and hospital
management systems in India.