(050-CMT-01-02) CSE- Health Informatics

Significance of the Programme:

The importance of Health Informatics within the realm of computer science is underscored by its transformative influence on the healthcare sector. It serves as a catalyst for advancements in patient care, optimization of decision-making procedures, and the overall improvement of healthcare delivery efficiency. This course focuses on Introduction to Health Informatics, Database Management Systems, Healthcare Information Systems, Medical Terminology, Programming for Healthcare, Health Data Analytics, Clinical Decision Support Systems (CDSS), Healthcare Cybersecurity, Telehealth and Mobile Health (mHealth), Healthcare Data Standards, Biomedical Signal Processing, Health Informatics Project Management, Computer Networks in Healthcare, Human-Computer Interaction in Healthcare, Healthcare Data Privacy and Ethics, Healthcare Software Development etc..

Career Options:

- Health information consultant
- Clinical Analyst
- Data Analyst/Data Manager
- Healthcare Architect/ Healthcare Consultant
- Informatics Specialist/ Informatics Systems Engineer/ Information Security Analyst
- Intelligence Analyst

Programme Objectives:

- To develop problem-solving and design thinking skills of engineering with medicine
- To deliver advanced medical innovations for prompt and precise diagnostic procedures in the future
- To provide computer technology-based solutions to manage health information.
- To Employ the principles of information technology and computing technology to the concepts of health and medicine, modern healthcare solutions

Outcomes of the Program:

- Apply the knowledge of mathematics, science, engineering fundamentals to the solution of complex engineering problems and medicine.

- Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- The ability to develop computational knowledge and project development skills using innovative tools and techniques to solve problems in the areas of Data Science, Predictive Analytics, Advanced Machine Learning, Medical Informatics, Healthcare Organization and Administration

Major Course Modules:

- Basic Mathematics for Computer Science
- Programming & Algorithms
- Databases & Storage Systems
- Introduction to Health Informatics, Business Intelligence Tools and application
- Artificial Intelligence in Healthcare, Applied ML, Applications of AI in Healthcare , Medical Imaging
- IoT in Healthcare, Wearable Technology and IoT
- Security and Privacy Policies for Health Care, Social and Organizational Issues in Health Informatics, Ethics & Legal Issues in Health Informatics,