School of Computing Science and Engineering

B.Tech Health Informatics

Programme Output (POs):

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. Design/development of solutions: 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.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs):

PSO1: Apply engineering knowledge to find innovative solutions to address the needs of technology in healthcare domain.

PSO2: Understand the complex healthcare system of legal and regulatory compliance that improves the existing ecosystem in current medical technology.

PSO3: Apply core concepts of database design to facilitate in managing the large amounts of data produced and captured in the healthcare environment.

PSO4: Explore problems related to health informatics and provide valid experimental results through industry academia interface.

PSO5: Apply technology and the healthcare quality framework to meet the goals of the triple aim of improving the patient experience of care, improving the health of populations, and reducing the per capita cost of health care.

Programme Educational Outcome (PEOs):

PEO1. Health informatics professionals use their knowledge of healthcare, information systems, databases, and information technology security to gather, store, interpret and manage the massive amount of data generated when care is provided to patients.

PEO2. They are typically competent in the language of medical coding, a classification system used across all countries to identify medical procedures.

PEO3. Ensures that patient health information, such as medical history, treatments, and test results, are integrated, accessible, accurate and secure.

PEO4. Utilize their communication skills is an everyday activity, as health informaticists meet and work closely with other healthcare professionals, such as Nurses, physicians, respiratory therapists, and physical therapists.

PEO5. They also interact with IT professionals to improve the way data is generated, analyzed and presented.