

## **Artificial Intelligence in Healthcare**

<b>Semester No 7-8</b>	<b>Code BI-4XX</b>	<b>Credit Hours 3-0</b>
------------------------	--------------------	-------------------------

### **Course description:**

The healthcare service system plays a pivotal role in the medical domain that constitutes massive demands of human life. To evolve, healthcare providers in developing countries are using intelligent technologies like artificial intelligence (AI) and machine learning techniques. Regarding AI integration, advancements in healthcare have led to research on human-centered healthcare intelligent systems. AI technologies exert influence on the development of intensive care and supervisory activities in hospitals and clinics.

### **Recommended Books:**

1. *Ranschaert ER, Morozov S, Algra PR, editors. Artificial intelligence in medical imaging: opportunities, applications and risks. Springer; 2019 Jan 29.*
2. *Agah A. Introduction to medical applications of artificial intelligence. CRC Press; 2013 Nov 6.*
3. *Consoli S, Recupero DR, Petkovic M. Data science for healthcare. Berlin: Springer International Publishing; 2019.*

### **Prerequisite:**

1. Programming Fundamentals
2. Artificial Intelligence

### **Course Learning Outcomes:**

After the course, the students will develop a holistic understanding of AI's growing role in health care through an immersive online experience that draws on real-world case studies. The course will explore how AI strategies have been successfully deployed within the sector. The students will learn to ask the right questions when evaluating an AI technique for potential use within their own context.

### **Assessment system:**

Quizzes	10-15%
Assignments	5-10%
MSE	30-40%
ESE	40-50%

### **Week wise Lecture Plan:**

<b>Wee k</b>	<b>Lecture Topic</b>	<b>Quizzes</b>	<b>Assig nment s</b>
1	Introduction to clinical data Introduction to healthcare systems		
2	Fundamentals of AI in healthcare		1
3	Integration of AI in medical imaging and home-care technologies	1	
4	Evaluations of AI Applications in healthcare		

5	AI assisted decision making analysis and health services		2
6			
7	Integration of AI with advanced technologies, such as blockchain	2	
8			
9	<b>MIDTERMS</b>		
10	AI and Telehealth		3
11			
12	Integration of AI in the management of healthcare setups	3	
13			
14	AI for medical diagnosis		4
15			
16	AI and innovations in the Internet of Medical Things	4	
17			
18	<b>END SEMESTER EXAMINATION</b>		