



Introduction to Healthcare Technology in 4IR

Short Learning Programme (SLP)

May 2021

Faculty of Health Sciences, University of Johannesburg

The Fourth Industrial Revolution (4IR) represents an era in the manufacturing industry characterised by the increasing automation of medical devices that is driven by the technologies of Artificial Intelligence (AI), the Internet-of-Medical Things (IoMT) and cyber-physical systems (CPS). The adoption of 4IR in the provision of medical care has the potential to improve the quality of human life by creating innovative ways of diagnosing, preventing and curing disease. With 4IR, current health care systems can be reformed to be patient-centred and inclusive, which will extend access to healthcare to a larger section of the community. There is a need for platforms that would introduce personnel to innovations and technologies relating to 4IR and this SLP serves that purpose. The SLP aims to develop students' knowledge of a spectrum of healthcare innovations and technologies that arise with the increasing automation of medical devices. Such knowledge is important in determining the justifiability of promoting the implementation of 4IR within the South African (SA) setting.

Detailed course breakdown:

1. Introduction to the Fourth Industrial Revolution – Healthcare 4.0
2. MedTech and the Internet of Medical Things
3. Robotics in healthcare
4. Virtual/Augmented Reality in healthcare
5. 3D Printing in healthcare
6. The use of drones in healthcare
7. Artificial Intelligence and Healthcare
8. Big data in healthcare
9. Blockchain – Distributed Ledger Technologies
10. Cybersecurity and healthcare

Entry requirements:

There are no entry requirements other than an interest in healthcare technology and biomedical engineering or a need for knowledge about the integration and application of 4IR in healthcare.

Medium: Online

Duration: 4 Months

Cost: R4000-00

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CPD Points have been applied for through HPCSA Accreditor

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