What is Informatics?

Informatics is the study of the structure, behaviour, and interactions of natural and engineered computational systems.

Informatics studies the representation, processing, and communication of information in natural and engineered systems. It has computational, cognitive and social aspects. The central notion is the transformation of information - whether by computation or communication, whether by organisms or artifacts.

Understanding informational phenomena - such as computation, cognition, and communication - enables technological advances. In turn, technological progress prompts scientific enquiry. The science of information and the engineering of information systems develop hand-in-hand. Informatics is the emerging discipline that combines the two.

In natural and artificial systems, information is carried at many levels, ranging, for example, from biological molecules and electronic devices through nervous systems and computers and on to societies and large-scale distributed systems. It is characteristic that information carried at higher levels is represented by informational processes at lower levels. Each of these levels is the proper object of study for some discipline of science or engineering. Informatics aims to develop and apply firm theoretical and mathematical foundations for the features that are common to all computational systems.