***What is information security***

[MUSIC] Let's start this course by considering some definitions. By the end of this unit, you'll be able to answer the question, what is information security? Information can be considered as some meaning conveyed by a sequence of symbols. The symbols can be alphabetics which is characters, numbers, punctuations etc. Or it could be, for example, a genetic sequence and can be physical or logical. So a book or something on a computer.

0:34

Information can be measured, a discipline called Information Theory that developed from the work of Claude Shannon in the 1940s. Additional aspects surround the definition of information, typically includes, accurate, timely, contextualised and relevant, purposeful, that is specific and can be organized.

0:59

Valuable, because we can monetize it. We can increase understanding, decrease uncertainty, and it can affect behavior decisions and outcomes. Security has several meanings. The one I will use here is the state of being free from danger or threats. It can be applied to both physical and logical scenarios. To a vulnerable asset or a valuable asset. The Cambridge English Dictionary says that security is the protection of a building, a person, an organisation or a country against threats such as crime. Security can be provided through physical artifacts such as walls and locks. People and processes, inspections, surveillance, authorizations such as we find in airports. Combining information and security, we see useful definitions. From Wikipedia, information security is defined as the practice of defending information from unauthorised access, use, disclosure, disruption, modification, inspection, recording or destruction. It is a general term that can be used regardless of the form that the data may take, whether that's physical or in a computer.

2:14

We often use information security in the context of computer systems. In recent years, the term cyber security has been coined. So, the association of computer machinery has a joint task force which is defining cyber security. They define it as a computing-based discipline involving technology, people, information, and processes to enable assured operations of an organization. It involves the creation, the operations, analysis and testing of secure computer systems. It is an interdisciplinary course of study, which includes aspects of law, policy, human factors, ethics, and risk management in the context of adversaries. From the definitions, we can see that information security is broader or wider than cyber security. Although today, much of information security is, of course, framed within the context of cyber security. The readings in this section allow us to explore the definition of information security and cyber security further. In the next section, we explore the different aspects that make up information security to give us a breadth to our definition. [MUSIC]