

Программа учебной дисциплины «Management Information Systems»

Утверждена
Академическим советом ООП
Протокол № от «__»_____20__ г.

Автор	Грекул В.И., к.т.н.,
Число кредитов	5
Контактная работа (час.)	60
Самостоятельная работа (час.)	188
Курс	1
Формат изучения дисциплины	онлайн-курс https://learn.saylor.org/course/view.php?id=4

I. ЦЕЛЬ, РЕЗУЛЬТАТЫ ОСВОЕНИЯ ДИСЦИПЛИНЫ И ПРЕРЕКВИЗИТЫ

Management Information Systems (MIS) is a formal discipline within business education that bridges the gap between computer science and well-known business disciplines such as finance, marketing, and management. In spite of this, most students will only take one or two MIS courses as part of their undergraduate program.

The term “Management Information Systems” has several definitions, depending upon where you look or whom you ask. Common among these many definitions is that MIS represent a collection of technologies, people, and processes that manage the information and communication resources of an organization.

Main provisions of the discipline should be used further to prepare master theses, scientific articles and reports.

II. СОДЕРЖАНИЕ УЧЕБНОЙ ДИСЦИПЛИНЫ

1. Introduction to Management Information Systems

This unit will introduce you to the concept of MIS and the impact it has on business organizations. Most people recognize that information systems are composed of technologies such as computers, keyboards, and networks, but technology is just one small component. Some argue that other components of MIS are far more important. Information systems are made up three high-level components: technology, people, and process. Later in the course, you will spend more time learning about the specifics of each of the three components introduced in this unit.

Innovation drives MIS. The right technology, processes, and people come together to solve problems utilizing new techniques and strategies. In this unit, you will also look at the applications of MIS in business and learn how far MIS has come since the inception of the information age.

2. MIS Basics: Hardware, Software, Networking, and Security

As mentioned in the course introduction, much of MIS is now centered on technology. Accordingly, MIS capabilities are mostly limited to the hardware and software capabilities of a given system. Ten years ago, the average Internet user could download an MP3 music file in a few

minutes over a cable. This can now be done in seconds wirelessly from just about anywhere in the developed world thanks to improvements in hardware and software. While it is nearly impossible to remain in front of technology developments, it is possible to analyze trends in technology advancements and identify what hardware and software may give you a competitive advantage.

This unit will first discuss the hardware component of technology, followed by software. The unit finishes with a discussion of networking as a component of technology.

3. Data and Databases

Data is a collection of facts. For example, population estimates for China and the United States are data. Information is the presentation of these facts in an organized manner, that is, the presentation of these population counts side-by-side with other facts like per capita income, for example. Knowledge refers to the use of information to make informed decisions. In this case, you might consider these figures critical knowledge for making policy decisions about China and the United States. Managing data allows the government, corporations, and even individuals to apply this knowledge to their everyday lives. Managing data can be difficult because databases are often filled with more information than you need. In this unit, you will explore the challenges of data management and learn how to take data and turn it into knowledge.

4. Information Systems and Organization Strategy

Strategic MIS is the application of information management in the overall strategy of a business. Many corporations include a Chief Information Officer (CIO) in executive management to implement information systems to be more competitive. What good would it do for Apple to create an iPhone application that can tell where you are and serve you ads based on location if it was unable to process that information? Part of the role of the CIO would be to figure out if it is possible to do this now – and if not now, when it will be.

This unit will examine how information technology and information systems change the way organizations operate. The unit starts with an examination of some of the key technological forces that characterize the information age, which all firms must consider in their strategic planning. Next, you will learn about the special characteristics and challenges faced by business-to-business operations. The unit concludes with an examination how organizations adapt to technological changes.

5. Information Systems Development

Businesses have diverse needs. While software packages for managing information exist, most software is not "plug-and-play" ready for most business applications. IT departments, in conjunction with representatives from all lines of business, must work together to develop and implement information system solutions. The IS development process can range from the simple to the extremely complicated. Managers often find themselves disagreeing about what information is most important and what is worth developing. Trade-offs between financial resources, time, and the capabilities of current information systems can lead to frustration. For this reason, IS development is a very important function within a business.

6. Information Systems in Society and the World

Information systems' reach extends well beyond the world of business. Today it is nearly as easy to communicate with someone on the other side of the world as it is to talk to someone next door. New technologies create situations that society has never dealt with before. How do we handle the new capabilities that these technologies enable? Will societies need new laws, new social mores, to protect us from ourselves regarding technology?

This unit concludes with a look at the future of MIS. After studying the security issues and failures of various systems, the outlook can seem bleak. Wherever there is a problem in MIS, there are opportunities to find profitable solutions.

III. ОЦЕНИВАНИЕ

Procedure for the formation of estimates on discipline

Generating estimates of the discipline is made in accordance with the Regulations on the organization of the control of knowledge, approved by the Academic Council of the HSE.

Calculation of the grade

The grade for the course is determined as mark for exam:

$$Q_{exam} = (1 \dots 10);$$

IV. ПРИМЕРЫ ОЦЕНОЧНЫХ СРЕДСТВ

Evaluation tools for certification of the student

- define what an information system is by identifying its major components;
- describe the basic history of information systems; and
- describe what innovation is and how technology contributes to it.
- compare and contrast hardware and software;
- identify the primary components of a computer and the functions they perform;
- describe the two primary categories of software;
- describe the advantages and disadvantages of cloud computing for companies;
- define the term open-source and identify its primary characteristics;
- identify the types of networks and their general functions;
- identify the information security triad; and
- describe the tools used to secure information technologies.
- define metadata;
- describe the differences between data, information, and knowledge;
- define the term database and identify the steps to creating one;
- describe the purpose of a database management system;
- describe the characteristics of a data warehouse;

- define data mining and describe its role in an organization; and
- list the components of knowledge management.
- describe how information systems can provide businesses with competitive advantage;
- describe how information technology influences Porter's Five Forces and the Value Chain model;
- identify the different systems needed to support business processes in an organization;
- understand how information technology combined with business processes can bring an organization competitive advantage;
- describe each of the different roles that people play in the design, development, and use of information systems;
- describe the career paths available to those who work with information systems;
- explain the importance of where the information-systems function is placed in an organization; and
- describe the different types of users of information systems.

V. РЕСУРСЫ

<https://learn.saylor.org/course/view.php?id=41>

BUS206: Management Information Systems

Материально-техническое обеспечение дисциплины

Inventory and logistics support of discipline

Personal computer (laptop).