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| **Study programme:** | **Professional Graduate Study Programme *Management in Agriculture*** |
| **Course:** | **BUSINESS INFORMATICS** |
| **Course code:** 141730**Course status:** compulsory | **Semester:** **I** | **ECTS credits: 4** |
| **Course holder:**  | **Damir Vuk, MSc., senior lecturer** |
| **Modes of delivery:** | **Number of hours**  |
| Lectures | 25 |
| Exercises | 10 |
| Seminars | 5 |

**Course objective:** Train students through lectures, seminar papers, exercises and independent work to notice, understand and be able to comment, evaluate and use the potential that the application of modern information technology can have for business improvement both in operational and strategic terms. The primary goal is to train students to be able to participate in efficient support for the development and application of modern IS, with an emphasis on those in agribusiness.

**Course content**

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|  | **Course units** | **Modes of delivery:**  | **Places of delivery** |
| **L** | **E** | **S** |
|  | Introduction to the basic concepts of computer science and related activities.Digital computers - principles of construction and functioning:1. Principles of construction and composition of a digital computer.
2. Basic principles of digital computer functioning.
3. Computer parts and peripheral units.
4. Types of digital computers and their purpose.
5. Turning points in the development or application of digital computers throughout history.
 | 4 |  |  | IT lecture hall |
|  | **Concept and types of software:**1. Concept of software.
2. Software licensing – types of licenses, authorship, ownership.
3. Open-source software, proprietary and free software.
4. System software - operating systems: concept and types.
5. Application software - concept and types.
 | 1 |  |  | IT lecture hall |
|  | Internet and Internet services:1. The concept and historical development of the Internet
2. Internet services.
3. E-mail.
4. WWW.
5. CMS.
 | 3 |  |  | IT lecture hall |
|  | Electronic business:1. Basic terms.
2. Business websites and their purpose.
3. Electronic business models.
4. Internet and marketing communication.
 | 3 |  |  | IT lecture hall |
|  | Information systems in business:1. Concept and components of the information system - IS and IT.
2. Data, information, knowledge, databases.
3. Development and organization of the information system.
4. Impact of IS on the organization and business processes: measurable and non-measurable effects.
5. Management of business processes using IT.
6. ERP systems.
7. Strategic application of IT in business - key business indicators
 | 4 |  |  | IT lecture hall |
|  | Modern IT technologies and tools for business decision-making:1. Business intelligence, data analysis, data warehouses.
2. Data mining, big data.
3. Data visualization.
4. Artificial intelligence and intelligent systems.
 | 2 |  |  | IT lecture hall |
|  | Digital society and digital economy:1. IT and the 4th industrial revolution.
2. Digital society and digital economy.
3. Digital disruption.
4. Digital business transformation.
5. IT that enables digital transformation.
6. Digital transformation - cases from practice.
7. Information security and protection.
 | 4 |  |  | IT lecture hall |
|  | Application of IT in agriculture:1. Digital transformation in agribusiness.
2. Digital agriculture.
3. Precision agriculture.
4. Examples of innovations in agribusiness based on IT.
 | 2 |  |  | IT lecture hall |
|  | Office software tools1. Concept, components, advantages and disadvantages of office software.
2. Open-source office software and free software.
 | 2 | 2 |  | IT lecture hall |
|  | Solving tasks using office software (LibreOffice). |  | 6 |  | IT lecture hall |
|  | Basic creation of simple web documents (HTML). |  | 2 |  | IT lecture hall |
|  | Examples of IT use in agriculture (practice cases). |  |  | 2 | IT lecture hall |
|  | Defences and presentations - discussions of seminar assignments. |  |  | 3 | IT lecture hall |
| **In total** | **25** | **10** | **5** | **40** |

**L=Lectures, E=Exercises, S=Seminars**

**Learning outcomes (LO)**

LO 1. Evaluate/assess the importance of information systems, and their connection with the management of business processes of small and medium-sized enterprises in the age of digital society and the omnipresent Internet.

LO 2. Analyse and evaluate the possible effects of the application of modern information technology on business in agriculture.

LO 3. Create (independently or as a team) a strategy for the application of information technologies in the business of small or medium-sized enterprises with an emphasis on the initiative of undertaking digital transformation.

LO 4. Create (independently or as a team) strategy and policy of application of office software for appropriate business tasks in office business.

 Course holder:

 Damir Vuk, MSc., senior lecturer

Križevci, July 2024