TECHNOLOGY AND CYBERSECURITY MANAGEMENT

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| Course code | *MNG286* |
| Compulsory in the programmes | *Ellective* |
| Level of studies | *Undergraduate* |
| Number of credits and | *6 ECTS (48 contact hours + 6 consultation hours, 106 individual work hours)* |
| Course coordinator (title and name) | *Prof. Dr. Tadas Limba* |
| Prerequisites | *None* |
| Language of instruction | *English* |

**THE AIM OF THE COURSE:**

Purpose of the course is to introduce the relationship in the context of management between information society and information communication technology development, disruptive technologies, business information systems and cyber security globalization, to examine the peculiarities of information systems’ development, WEB technologies – WEB 1.0, WEB. 2.0, WEB 3.0, different types of internet technology platforms (e. g. mobile applications), Industry 4.0 and Industry 5.0 strategies for different business solutions, the importance of privacy and data protection on cyberspace (some GDPR aspects for cyberspace) by implementing e-signature and e-time stamping technologies for business, the cyber security strategic management in a global business context, the implementation of e-payment systems, e-money and crypto currency,

fosterage of Technology Start-ups, marketing technology tools and to apply the acquired knowledge in practical situations.

**MAPPING OF COURSE LEVEL LEARNING OUTCOMES (OBJECTIVES) WITH DEGREE LEVEL LEARNING OBJECTIVES (See Annex), ASSESMENT AND TEACHING METHODS**

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| Course level learning outcomes (objectives) | Degree level learning objectives (Number of LO) | Assessment methods | Teaching methods |
| CLO1. Students will understand technologies applications and cybersecurity challenges | BLO1.1. | Case study presenatation  Exam | Lectures  Case study analysis |
| CLO2. Students will be able to conduct an analysis to identify a problem associated with cybersecurity issues, to generate managerial options and propose viable solutions | BLO1.2 | Case study presenatation  Exam | Lectures  Case study analysis |
| CLO3. Students will be able to make decisions using appropriate technologies in managing problems, using IT tools | BLO3.2.  BLO3.2 | Case study presenatation  Exam | Lectures  Case study analysis |
| CLO4.Students will be able to present strategic decisions, related with cybersecurity isues in management field. | BLO4.2 | Case study presenatation  Exam | Lectures  Case study analysis |

**ACADEMIC HONESTY AND INTEGRITY**

The ISM University of Management and Economics Code of Ethics, including cheating and plagiarism are fully applicable and will be strictly enforced in the course. Academic dishonesty, and cheating can and will lead to a report to the ISM Committee of Ethics. With regard to remote learning, ISM remind students that they are expected to adhere and maintain the same academic honesty and integrity that they would in a classroom setting.

**COURSE OUTLINE**

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| **Topic** | **In-class hours** | Readings |
| 1. Relationship in Context of Management between Information Society and Information Communication Technology Development. | 6 | Zhu, Z., Zhao J., Bush, A. (2020). The Effects of E-business Processes in Supply Chain Operations: Process Component and Value Creation Mechanisms. Volume 50. Elsevier, internet site: <https://doi.org/10.1016/j.ijinfomgt.2019.07.001> |
| 2. Disruptive Technologies, Industry 4.0 and Industry 5.0 Strategies for Different Business Solutions. | 6 | Shawn Amuial, Josias N. Dewey, Jeff Seul (2017). The Blockchain: A Guide for Legal and Business Professionals. |
| 3. Business Information Systems and Cyber Security Strategic Management in a Global Business Context. | 6 | Singh, S., Singh, N. (2015) Internet of Things (IoT): Security Challenges, Business Opportunities & Reference Architecture for E-commerce. IEEE, internet site: https://doi.org/10.1109/ICGCIoT.2015.7380718 |
| 4. WEB technologies – WEB 1.0, WEB. 2.0, WEB 3.0, Different Types of Internet Technology Platforms. | 6 | Cataldo, A., Astudillo, A. C., et al. (2020) Towards an Integrated Maturity Model of System and E-Business Applications in an Emerging Economy. Volume 15, No. 2. Elsevier, internet site: http://dx.doi.org/10.4067/S0718-1876202000020010 |
| 5. Importance of Privacy and Data Protection on Cyberspace by Implementing E-Signature and E-Time Stamping Technologies for Business. | 6 | Fang, W., Chen, W., et al. (2020) Digital Signature Scheme for Information Non-repudiation in Blockchain: a state of the art review. Springer, internet site: <https://doi.org/10.1186/s13638-020-01665-w> |
| 6. Implementation of E-Payment Systems, E-Money and Crypto Currency. | 6 | Sepashvili, E. (2020) Digital Chain of Contemporary Global Economy: E-Commerce through E-Banking and E-Signature. Volume 11, No. 3. Business and Management Sciences International Quarterly Review, internet site: doi: 10.13132/2038-5498/11.3.239-249 |
| 7. Technology Start-ups Development Projects. | 6 | Audretscha, D., Colombellic, A., Grillid, L, Minolae, T., Rasmussen E. (2020) Innovative start-ups and policy initiatives. Elsevier. Research Policy 49 |
| 8. Marketing technology tools and Consumers Segmentation on Cyberspace. | 6 | Kurtuluş, K., Kurtuluş, S., Bulut, D. (2016) Benefit Segmentation of Internet Users and Their Addictive Behavior. Yildiz Social Science Review, internet site: https://dergipark.org.tr/en/pub/yssr/issue/23897/254562 |
|  | **Total: 48 hours** |  |
| CONSULTATIONS | 6 |  |
| FINAL EXAM | 2 |  |

**FINAL GRADE COMPOSITION**

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| --- | --- |
| **Type of assignment** | **%** |
| *Group Components 50%* |  |
| Case Study | *50%* |
| *Individual component* |  |
| Examination Test | *50%* |
| **Total:** | **100** |

**DESCRIPTION AND GRADING CRITERIA OF EACH ASSIGNMENT**

*(Provide short descriptions and grading criteria of each assignment)*

1. Details of the practical case analysis will be provided during the lectures.
2. Exam will be multiple choice test from all course material.

**RETAKE POLICY**

The retake exam will assess knowledge of the entire course’s content and be worth 50% of students’ final grade. Case study cannot be resubmitted.

**REQUIRED READINGS**

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| Zhu, Z., Zhao J., Bush, A. (2020). The Effects of E-business Processes in Supply Chain Operations: Process Component and Value Creation Mechanisms. Volume 50. Elsevier, internet site: <https://doi.org/10.1016/j.ijinfomgt.2019.07.001> |
| Shawn Amuial, Josias N. Dewey, Jeff Seul (2017). The Blockchain: A Guide for Legal and Business Professionals. |
| Singh, S., Singh, N. (2015) Internet of Things (IoT): Security Challenges, Business Opportunities & Reference Architecture for E-commerce. IEEE, internet site: https://doi.org/10.1109/ICGCIoT.2015.7380718 |
| Cataldo, A., Astudillo, A. C., et al. (2020) Towards an Integrated Maturity Model of System and E-Business Applications in an Emerging Economy. Volume 15, No. 2. Elsevier, internet site: http://dx.doi.org/10.4067/S0718-1876202000020010 |
| Fang, W., Chen, W., et al. (2020) Digital Signature Scheme for Information Non-repudiation in Blockchain: a state of the art review. Springer, internet site: <https://doi.org/10.1186/s13638-020-01665-w> |
| Sepashvili, E. (2020) Digital Chain of Contemporary Global Economy: E-Commerce through E-Banking and E-Signature. Volume 11, No. 3. Business and Management Sciences International Quarterly Review, internet site: doi: 10.13132/2038-5498/11.3.239-249 |
| Audretscha, D., Colombellic, A., Grillid, L, Minolae, T., Rasmussen E. (2020) Innovative start-ups and policy initiatives. Elsevier. Research Policy 49 |
| Kurtuluş, K., Kurtuluş, S., Bulut, D. (2016) Benefit Segmentation of Internet Users and Their Addictive Behavior. Yildiz Social Science Review, internet site: https://dergipark.org.tr/en/pub/yssr/issue/23897/254562 |

**ANNEX**

**DEGREE LEVEL LEARNING OBJECTIVES**

**Learning objectives for the Bachelor of Business Management**

*Programmes:*

*International Business and Communication,*

*Business Management and Marketing,*

*Finance,*

*Industrial Technology Management,*

*Entrepreneurship and Innovation*

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| **Learning Goals** | **Learning Objectives** |
| Students will be critical thinkers | BLO1.1. Students will be able to understand core concepts and methods in the business disciplines |
| BLO1.2. Students will be able to conduct a contextual analysis to identify a problem associated with their discipline, to generate managerial options and propose viable solutions |
| Students will be socially responsible in their related discipline | BLO2.1. Students will be knowledgeable about ethics and social responsibility |
| Students will be technology agile | BLO3.1. Students will demonstrate proficiency in common business software packages |
| BLO3.2. Students will be able to make decisions using appropriate IT tools |
| Students will be effective communicators | BLO4.1. Students will be able to communicate reasonably in different settings according to target audience tasks and situations |
| BLO4.2. Students will be able to convey their ideas effectively through an oral presentation |
| BLO4.3. Students will be able to convey their ideas effectively in a written paper |

**Learning objectives for the Bachelor of Social Science**

*Programmes:*

*Economics and Data Analytics,*

*Economics and Politics*

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| **Learning Goals** | **Learning Objectives** |
| Students will be critical thinkers | ELO1.1. Students will be able to understand core concepts and methods in the key economics disciplines |
| ELO1.2. Students will be able to identify underlying assumptions and logical consistency of causal statements |
| Students will have skills to employ economic thought for the common good | ELO2.1.Students will have a keen sense of ethical criteria for practical problem-solving |
| Students will be technology agile | ELO3.1. Students will demonstrate proficiency in common business software packages |
| ELO3.2. Students will be able to make decisions using appropriate IT tools |
| Students will be effective communicators | ELO4.1.Students will be able to communicate reasonably in different settings according to target audience tasks and situations |
| ELO4.2.Students will be able to convey their ideas effectively through an oral presentation |
| ELO4.3. Students will be able to convey their ideas effectively in a written paper |