ISM UNIVERSITY OF MANAGEMENT AND ECONOMICS

APPROVED BY
THE STUDY COMMISSION
Minutes No. 02-12-2025-13
as of 26th August 2025

TECHNOLOGY AND CYBERSECURITY MANAGEMENT

Course code	*MNG286*
Compulsory in the programmes	*Elective*
Level of studies	*Undergraduate*
Number of credits	*6 ECTS (48 contact hours + 6 consultation hours + 2 hours of examination, 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

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

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

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

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

APPROVED BY
THE STUDY COMMISSION
Minutes No. 02-12-2025-13
as of 26th August 2025

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

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

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