

Northern Technical University



الجامعة التقنية الشمالية

*First Cycle – Bachelor's degree (B.Tec.) –Information Techniques
Management*

بكالوريوس إدارة تقنيات المعلومات



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1. Overview

This catalogue is about the courses (modules) given by the program of Information Techniques Management to gain the Bachelor of Technique degree. The program delivers (50) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظرة عامة

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج إدارة تقنيات المعلومات للحصول على درجة بكالوريوس تقني. يقدم البرنامج (50) مادة دراسية (اجبارية واختيارية)، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و ٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

2. Undergraduate Courses 2024-2025

Module 1

Code	Course/Module Title	ECTS	Semester
TCMM 108	Principles of Economics	6	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	78	4.8
Description			
This module introduces students to the fundamental concepts of microeconomics and macroeconomics. Focusing on how economic principles impact technology management, students explore topics such as supply and demand, market structures, economic cycles, fiscal policies, and the influence of economic factors on technology innovation and deployment. The course aims to equip future IT managers with the ability to make informed decisions that reflect both economic realities and technological advancements.			

Module 2

Code	Course/Module Title	ECTS	Semester
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TCMM 105	Principles of Management	6	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	78	4.8
Description			
This course covers the essential theories and practices of management, emphasizing the skills necessary to lead and manage in the dynamic field of information technology. Topics include strategic planning, organizational behavior, leadership, control mechanisms, and change management. The module prepares students to effectively manage resources, projects, and teams in IT environments, fostering skills that promote efficiency and innovation within tech-driven organizations.			

Module 3

Code	Course/Module Title	ECTS	Semester
ITM 110	Mathematics	7	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	2	93	5.46
Description			
Tailored for Information Techniques Management students, this module focuses on mathematical concepts applicable to technology and management. It includes studies in algebra, calculus, probability, and statistics, providing the quantitative tools necessary for data analysis, decision making, and problem solving in IT management. The course is designed to strengthen analytical skills that are crucial for optimizing systems and interpreting data trends within the technology sector.			

Module 4

Code	Course/Module Title	ECTS	Semester
ITM 109	Principles of Programing	7	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This introductory programming course is crafted for management students, focusing on the understanding and application of programming logic. Students learn basic programming languages relevant to managing IT projects, with an emphasis on automating tasks, analyzing data, and developing simple software solutions that improve organizational efficiency. The module serves as a foundation for more advanced IT management topics, blending technical skills with managerial perspectives.			

Module 5

Code	Course/Module Title	ECTS	Semester
NTU 100	Human rights and democracy	2	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	32	1.2
Description			
n this module, students explore the principles of human rights and democracy, particularly in the context of information technology. The course discusses ethical considerations, legal frameworks, and the role of technology in promoting transparency and democratic processes. It also covers issues related to privacy, surveillance, and the digital divide. This knowledge is crucial for future IT managers to ensure that technology deployment upholds democratic values and human rights.			

Module 6

Code	Course/Module Title	ECTS	Semester
NTU 101	English Language(1)	2	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	0	32	1.2
Description			
Designed for students in Information Techniques Management, this course focuses on enhancing proficiency in English, with an emphasis on terms and contexts relevant to the tech industry. It includes technical reading, writing, speaking, and listening skills, aimed at improving communication in professional and technical settings. This module is crucial for students to effectively engage with global IT literature, documentation, and collaborations.			

Module 7

Code	Course/Module Title	ECTS	Semester
NTU 102	Computer Principles (1)	3	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	1	62	0.8
Description			

This foundational course provides an overview of basic computer concepts and operating systems, tailored for students in Information Techniques Management. It covers hardware components, software applications, data storage, and basic network configurations. The module is designed to equip students with a practical understanding of how computer systems function and interact, which is essential for managing and optimizing IT resources in any business environment.

Module 8

Code	Course/Module Title	ECTS	Semester
NTU 103	Arabic Language 1	2	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	32	1.2
Description			
ocused on enhancing linguistic skills within a technical and managerial context, this course develops proficiency in Arabic reading, writing, and communication. It is particularly structured to support students in Information Techniques Management, emphasizing terminology used in business and technology settings. This module aids in effective communication across diverse professional environments, essential for regional operations and collaborations.			

Module 9

Code	Course/Module Title	ECTS	Semester
TCMM 106	Principles of Accounting	7	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This course introduces basic accounting principles, focusing on their applications within the technology sector. Students learn about financial statements, budgeting, cost management, and financial decision-making processes relevant to IT projects and enterprises. The module is crucial for IT managers to oversee financial aspects of technology deployments and to ensure projects align with fiscal guidelines and business objectives.			

Module 10

Code	Course/Module Title	ECTS	Semester
TCMM 107	Principles of statistics	8	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	6	123	5.13
Description			
Tailored for information management students, this course covers statistical methods that are vital in analyzing data and informing decision-making in technology-driven businesses. Topics include descriptive statistics, probability, hypothesis testing, and regression analysis. This knowledge is fundamental for IT managers to make data-driven decisions and to apply statistical tools in optimizing business operations and technology strategies.			

Module 11

Code	Course/Module Title	ECTS	Semester
ITM 111	Object Oriented Programing	8	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	6.133
Description			
This programming course delves into object-oriented design and programming concepts, essential for managing software development projects within IT departments. Students learn about classes, objects, inheritance, encapsulation, and polymorphism using popular programming languages. The module equips future IT managers with the skills to oversee complex software projects and to collaborate effectively with development teams.			

Module 12

Code	Course/Module Title	ECTS	Semester
NTU 104	Sports	2	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	6	23	1.2
Description			
This physical education module promotes health and wellness, emphasizing the importance of physical			

activity for students in demanding academic and professional environments. It offers various sports activities that help in building teamwork, leadership, and stress management skills—attributes beneficial for future managers in the high-pressure IT industry.

Module 13

Code	Course/Module Title	ECTS	Semester
NTU 105	French Language	2	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	1	23	1.2
Description			
Designed for Information Techniques Management students, this course enhances French language skills, focusing on vocabulary and phrases used in business and technology contexts. It prepares students to engage with French-speaking partners and clients, facilitating international communication and expanding professional opportunities in the global tech industry.			

Module 14

Code	Course/Module Title	ECTS	Semester
NTU 201	Computer Principles (2)	3	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	2	62	0.6
Description			
Building on foundational knowledge, this course delves deeper into advanced computing concepts, including operating systems, algorithms, and system architecture. Designed for Information Techniques Management students, it focuses on the application of these principles in optimizing and securing IT infrastructures. Students learn critical skills in diagnosing and solving complex technical issues, essential for managing sophisticated information systems in any technological enterprise.			

Module 15

Code	Course/Module Title	ECTS	Semester
NTU 200	English Language (2)	2	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	32	3.33

Description
This continuation of English Language (1) advances the proficiency of Information Techniques Management students in technical and professional English. Emphasis is placed on business communication, technical documentation, and advanced linguistic skills necessary for global business environments. Students engage in complex conversations, presentations, and writing exercises that mirror real-world IT management scenarios.

Module 16

Code	Course/Module Title	ECTS	Semester
NTU 204	Professional Ethics	2	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	23	1.2
Description			
his module addresses ethical issues in the context of information technology management. Topics include data privacy, intellectual property rights, digital equity, and the ethical implications of artificial intelligence and machine learning. Through case studies and discussions, students learn to navigate the ethical landscape of technology use and management, preparing them to uphold integrity and ethical standards in their professional careers.			

Module 17

Code	Course/Module Title	ECTS	Semester
ITM 205	Principles of Financial Management	7	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	1	93	5.46
Description			
Specifically tailored for IT managers, this course covers financial principles relevant to the technology sector. Students explore topics such as capital budgeting, risk management, investment analysis, and financial strategy. The course is designed to equip future IT managers with the skills to ensure financial health and strategic investment in technology projects and departments.			

Module 18

Code	Course/Module Title	ECTS	Semester
ITM 206	Database Design	8	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	6.13
Description			
This course introduces the fundamentals of database systems with a focus on design, implementation, and management. Students learn relational database models, SQL, and data normalization practices. The module is critical for IT managers, as it provides the skills to oversee database projects, ensuring data integrity, security, and accessibility across organizational information systems.			

Module 19

Code	Course/Module Title	ECTS	Semester
ITM 205	Python Language	7	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	5	123	5.13
Description			
In this programming course, students learn Python—an essential tool in modern IT environments known for its simplicity and versatility. The module covers basic to intermediate concepts, including data structures, web scraping, and automation, tailored to managerial applications. It prepares students to implement Python in various IT management tasks, from data analysis to process improvement, enhancing efficiency across business operations.			

Module 20

Code	Course/Module Title	ECTS	Semester
NTU 203	Crimes of Al-Baath Party in Iraq	2	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	32	1.2
Description			
This course examines the historical and political impact of the Ba'ath Party in Iraq, focusing on human rights violations and political crimes committed during its governance. Through lectures, discussions,			

and analysis of primary sources, students in Information Techniques Management gain insights into the socio-political dynamics that have shaped modern Iraqi society and governance. This understanding is crucial for future leaders and managers who aim to navigate and contribute to the reconstruction and ethical governance in Iraq.

Module 21

Code	Course/Module Title	ECTS	Semester
NTU 202	Arabic Language 2	2	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	32	1.2
Description			
Building on the foundations laid in Arabic Language 1, this course further enhances the Arabic language skills of students, with a focus on advanced grammatical structures and vocabulary relevant to the fields of technology and management. Students engage in more complex readings and projects that require precise communication, critical for effective management and professional interactions in Arabic-speaking environments.			

Module 22

Code	Course/Module Title	ECTS	Semester
ITM 208	Principles of Marketing	5	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	78	3.13
Description			
This module introduces students to the core concepts of marketing with an emphasis on strategies relevant to the technology sector. Topics include market research, consumer behavior, digital marketing, product management, and brand strategy. Students learn how to craft marketing plans that leverage technology to meet business objectives, an essential skill for managers in technology-driven industries.			

Module 23

Code	Course/Module Title	ECTS	Semester
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ITM 209	Database Management	7	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This Expanding on database design principles, this course covers advanced aspects of database management, including administration, security, optimization, and scalability. Students learn through practical examples and projects how to manage complex database systems effectively, ensuring they support the organization's information management needs efficiently and securely.			

Module 24

Code	Course/Module Title	ECTS	Semester
ITM 210	Principles of Computer Networks	7	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This course covers the fundamentals of designing, implementing, and managing computer networks. Students explore various networking models, protocols, and hardware configurations. Emphasis is placed on network architecture, data transmission methods, and security practices, preparing students to manage and optimize networks in a corporate IT environment.			

Module 25

Code	Course/Module Title	ECTS	Semester
ITM 212	Statistics Analysis (SPSS)	7	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	4	93	5.46
Description			
This practical course introduces students to statistical analysis using SPSS, a powerful software tool for			

handling complex data sets. Students learn to perform various statistical tests, data management, and graphical presentations to support decision-making processes. The skills acquired are particularly valuable in roles that require robust data analysis and interpretation, key for strategic planning in IT management.

Module 26

Code	Course/Module Title	ECTS	Semester
ITM 211	Matlab	5	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	4	93	5.46
Description			
This module focuses on Matlab, a high-level programming and numeric computing environment used extensively in engineering and data analysis. Students learn to manipulate matrices, implement algorithms, and create user interfaces. The course emphasizes applications of Matlab in solving practical problems in IT management, from data analysis to system modeling and simulation, enhancing their technical skills and analytical capabilities.			

Module 27

Code	Course/Module Title	ECTS	Semester
ITM 301	Web Design	7	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	5	108	4.46
Description			
This course introduces the principles of web design, focusing on creating user-friendly, aesthetically pleasing, and functional websites. Students learn HTML, CSS, JavaScript, and responsive design techniques. The module emphasizes best practices in usability, accessibility, and search engine optimization (SEO). Through hands-on projects, students apply these skills to build websites that effectively serve business needs, preparing them to manage web projects in their future careers.			

Module 28

Code	Course/Module Title	ECTS	Semester
ITM 302	Project Management	5	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	36	2.46
Description			

Designed for aspiring IT managers, this course covers the fundamentals of project management, including planning, execution, monitoring, and closure of projects. Students learn methodologies such as Agile, Scrum, and Waterfall, focusing on their application in information technology projects. The course equips students with the tools to manage time, resources, and team dynamics effectively, ensuring the successful delivery of IT projects.

Module 29

Code	Course/Module Title	ECTS	Semester
ITM 303	Business Process Re-engineering	5	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	78	3.13
Description			
This module explores the concepts and strategies behind business process re-engineering (BPR), focusing on the radical redesign of core business processes to achieve dramatic improvements in productivity, cycle times, and quality. The course includes case studies and practical applications within IT management, teaching students how to leverage technology to streamline operations and enhance business efficiency.			

Module 30

Code	Course/Module Title	ECTS	Semester
ITM 304	Management Information System	6	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	78	3.8
Description			
This course delves into the development, management, and use of information systems in organizations. Topics covered include system design, data management, and the strategic role of MIS			

in business decision-making. Students learn how to align MIS with business goals to enhance competitiveness and operational efficiency, preparing them to oversee information systems that support business operations.

Module 31

Code	Course/Module Title	ECTS	Semester
ITM 304	Digital Transformation	4	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	2	62	2.53
Description			
Focusing on the integration of digital technology into all areas of a business, this course examines how technology changes business processes and customer experiences. Students explore case studies on digital transformation initiatives, understanding the challenges and strategies involved. The course prepares students to lead transformation projects that enhance digital capabilities and drive business innovation.			

Module 32

Code	Course/Module Title	ECTS	Semester
ITM 306	E-Marketing	4	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	63	2.46
Description			
This course introduces the strategies and tools necessary for effective online marketing. Topics include search engine optimization (SEO), pay-per-click (PPC) advertising, social media marketing, and email marketing. Students learn how to develop and implement digital marketing campaigns that target and engage online audiences, crucial for promoting products and services in today's digital-first marketplace.			

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Module 33

Code	Course/Module Title	ECTS	Semester
ITM 307	Big Data	7	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	4	108	4.46
Description			
This course explores the concepts, tools, and applications of big data within business environments. Students learn about data sources, data mining, and analytics techniques used to extract insights from large datasets. The module emphasizes the practical application of big data analytics in decision-making and strategic planning. Through hands-on projects, students gain experience with tools like Hadoop and Spark, preparing them to manage big data initiatives that enhance organizational performance.			

Module 34

Code	Course/Module Title	ECTS	Semester
ITM 304	Systems Design and Analysis	5	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	78	3.8
Description			
This module provides a comprehensive overview of system analysis and design methodologies used in the development of information systems. Students learn to assess business requirements, design system specifications, and oversee the development process. Emphasizing both traditional and agile methodologies, the course prepares students to lead systems design projects that align with business strategies and user needs.			

Module 35

Code	Course/Module Title	ECTS	Semester
ITM 304	Operating Systems	6	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	93	3.8
Description			
In this course, students examine the fundamental concepts and structures of operating systems. Topics include process management, memory management, file systems, and security. The module also covers different types of operating systems such as Windows, Linux, and UNIX. This knowledge is essential for IT managers to understand the environments in which software and hardware operate, ensuring efficient system performance and security.			

Module 36

Code	Course/Module Title	ECTS	Semester
ITM 310	Mobile Applications	6	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	4	93	5.46
Description			
Focusing on the design and development of mobile applications, this course introduces students to mobile programming languages and development platforms. Students learn to create applications for Android and iOS, considering user interface design, functionality, and performance optimization. The module prepares students to manage mobile development projects, from conceptualization to deployment, addressing the growing demand for mobile solutions in business.			

Module 37

Code	Course/Module Title	ECTS	Semester
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TCMM 300	Summer Training	0	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	0	0	0
Description			
This practical module provides students with real-world experience through internships or project-based training in a professional setting. Students apply theoretical knowledge gained from their studies to solve practical problems, gaining insights into the workings of IT departments and businesses. This experience is crucial for developing professional skills and understanding industry expectations, enhancing employability upon graduation.			

Module 38

Code	Course/Module Title	ECTS	Semester
ITM 311	Internet of Things	5	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	3	77	3.2
Description			
This course introduces the principles and applications of the Internet of Things, where students learn about IoT architecture, networks, and security concerns. The module covers the development and management of IoT devices and systems, focusing on their use in automating and optimizing business processes. Students explore case studies and engage in projects that apply IoT solutions to real-world problems, preparing them for roles in innovative technology environments.			

Module 39

Code	Course/Module Title	ECTS	Semester
ITM 312	Cloud Computing	5	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)

1	3	77	3.2
Description			
This module covers the fundamentals of cloud computing, including infrastructure, platforms, and software as services. Students learn about cloud service models, deployment strategies, and security challenges. The course emphasizes the business implications of cloud computing, preparing students to make informed decisions about cloud adoption and management. Through practical exercises, students explore how cloud solutions can be leveraged to enhance scalability, flexibility, and efficiency in IT management.			

Module 40

Code	Course/Module Title	ECTS	Semester
ITM 401	Artificial Intelligent	8	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	5	123	5.13
Description			
This course introduces the foundational concepts and applications of artificial intelligence, emphasizing its implications in information management. Students explore various AI techniques such as machine learning, natural language processing, and robotics. The module focuses on the integration of AI into business processes to enhance decision-making, automate tasks, and improve service delivery. Through practical projects, students gain insights into developing and managing AI-driven systems, preparing them to leverage AI technologies in IT management roles.			

Module 41

Code	Course/Module Title	ECTS	Semester
ITM 311	Total Quality Management	6	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	78	4.8
Description			

This course delves into the principles and practices of Total Quality Management, focusing on its application within the technology sector. Students learn about TQM tools and techniques such as Six Sigma, Kaizen, and 5S, which are essential for improving organizational performance and customer satisfaction. The module emphasizes a strategic approach to quality management, equipping students with the skills to lead quality improvement initiatives in IT environments.

Module 42

Code	Course/Module Title	ECTS	Semester
ITM 403	Strategic Management	5	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	1	78	3.13
Description			
This module covers the fundamentals of strategic planning and management in technology-driven organizations. Students explore how to formulate, implement, and evaluate strategies that align with business objectives and technological advancements. Topics include competitive analysis, resource allocation, and strategic decision-making. The course prepares students to think critically and act strategically, ensuring that IT initiatives support the broader goals of their organizations.			

Module 43

Code	Course/Module Title	ECTS	Semester
NTU 400	Scientific Research Methodology	4	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	62	2.533
Description			
Designed for students in technical fields, this course introduces the methodologies and tools for conducting scientific research. Topics include research design, data collection, statistical analysis, and ethical considerations. The module emphasizes the application of these methodologies to technology-			

related research, preparing students to undertake quality research projects and contribute to the field of information technology management.

Module 44

Code	Course/Module Title	ECTS	Semester
ITM 404	Software Engineering	7	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This course provides a comprehensive overview of software engineering principles and practices. Students learn about software development life cycles, methodologies, project management, and quality assurance. The module focuses on the application of engineering principles to software development, ensuring that software is reliable, efficient, and meets user requirements. This knowledge is crucial for IT managers responsible for overseeing software projects and ensuring alignment with business and technical requirements.			

Module 45

Code	Course/Module Title	ECTS	Semester
ITM 311	Cybersecurity	7	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	4.46
Description			
This course explores the essential principles and practices of cybersecurity, focusing on protecting information systems from threats and vulnerabilities. Students learn about encryption, network security, risk management, and ethical hacking. The module emphasizes the development of security			

policies and protocols to safeguard data and ensure compliance with legal and ethical standards. Through practical exercises and case studies, students are prepared to implement and manage robust cybersecurity measures in IT environments.

Module 46

Code	Course/Module Title	ECTS	Semester
ITM 406	Business Intelligence	7	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	93	5.46
Description			
This module introduces the concepts and tools of business intelligence (BI) that support decision-making in organizations. Students learn how to extract, analyze, and visualize data using BI software. Topics include data warehousing, dashboard development, and data mining. The course emphasizes the strategic use of BI to enhance business performance and competitive advantage, equipping students with the skills to manage BI projects and technologies.			

Module 47

Code	Course/Module Title	ECTS	Semester
ITM 406	Graduation Project	5	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	62	4.2
Description			
In this capstone course, students apply their acquired knowledge to a comprehensive project relevant to Information Techniques Management. The project typically involves identifying a problem, developing a solution, and implementing a technology-based system or conducting significant research. This module provides an opportunity for students to demonstrate their analytical, technical, and managerial skills, culminating in a presentation and report that showcase their readiness for professional IT management roles.			

Module 48

Code	Course/Module Title	ECTS	Semester
ITM 410	Data Structure	7	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	123	3.46
Description			
This course covers the fundamentals of data structures and algorithms, essential for efficient data management and processing. Students explore various data structures such as lists, stacks, queues, trees, and graphs, along with algorithms for searching, sorting, and optimization. The module emphasizes the application of these structures in solving real-world problems, particularly in designing software and managing complex data in information systems.			

Module 49

Code	Course/Module Title	ECTS	Semester
ITM 408	Financial Technology	4	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	63	2.46
Description			
This course examines the integration of technology into financial services. It covers topics such as blockchain, digital payments, robo-advising, and cybersecurity in banking. Students explore how these technologies disrupt traditional financial models and create new opportunities for innovation. The module prepares students to lead fintech initiatives, understanding both the technological and financial aspects critical for success in this rapidly evolving field.			

Module 50

Code	Course/Module Title	ECTS	Semester
ITM 409	Entrepreneurship	4	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	63	2.46

Description
Focused on cultivating entrepreneurial skills, this course encourages students to develop and evaluate business ideas within the tech industry. It covers business planning, funding strategies, marketing, and scalability. The course emphasizes innovation and risk-taking, equipping students with the tools to launch and manage start-ups, particularly in technology-driven markets. This module aims to inspire and prepare future leaders in the creation and growth of their own businesses.

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