

1st Year | 1st SEMESTER (FALL)

Programming and Problem Solving (Course type: required; Course code: AII102; Cr: 4; ECTS: 5)

Course objective: The aim of this course is to introduce fundamental concepts of programming.

Course Content: This course provides a use of built-in data structures in solving problems using the Python general-purpose programming language. In this course, students study how to write user-defined functions using iteration as well as recursion. This course also stresses the importance of programming tools such as programming editors and debuggers. The students are expected to work within a GNU/Linux environment. The course provides a basic introduction into object-oriented programming.

General Chemistry (Course type: required; Course code: CHM101; Cr: 4; ECTS:5)

Course objective: The aim of this course is to provide the basic concepts of chemistry and main elements of its content.

Course Content: A basic course emphasizing the metric system. Introduction to atomic theory, stoichiometry. The structural and physical properties of matter. Periodic relationship among elements and periodic table. Gaseous state. Thermo-chemistry. Energy and enthalpy. Electronic structure of atoms. Chemical bonding.

English I (Course type: required; Course code: ENG101; Cr: 3; ECTS: 3)

Course objective: This course aims at enabling students to understand their lessons and to express themselves in English.

Course Content: This course offers intermediate levels including a wide range of grammatical structures and vocabulary of English in order to build onto the foundation established at the Preparatory School. This course aims to bring the students to a level that will enable them to fulfil the requirements of main courses of their departments. Students will be encouraged to read a variety of texts as well as chapters from textbooks so that they can pursue their undergraduate studies at the university without major difficulty. ENG 101 is designed to improve the students' presentation ability. Students are expected to do an oral presentation. At the end of the course, they submitted their

written projects.

Calculus I (Course type: required; Course code: MTH101; Cr: 4; ECTS: 5)

Course objective: The primary aims of the course are to help students develop new problem solving and critical reasoning skills and to prepare them for further study in mathematics, the physical sciences, or engineering.

Course Content: Functions, limits and continuity. Derivatives. Mean value theorem. Sketching graphs. Definite integrals, infinite integrals (antiderivatives). Logarithmic, exponential, trigonometric and inverse trigonometric functions and their derivatives. L'Hospital's rule. Techniques of integration. Applications of the definite integral, improper integrals.

Physics I (Course type: required; Course code: PHY101 Cr: 4; ECTS: 5)

Course objective: The goal of physics is to understand how things work from first principles.

Course Content: Measurement, vectors, kinematics, force, mass. Newton's laws, applications of Newton's laws. Work and kinetic energy. Conservation of linear momentum. Impulse, collisions, rotation, moments of inertia. Torque, angular momentum, conservation of angular momentum, static equilibrium.

Linear Algebra (Course type: required; Course code: MTH113 Cr: 3; ECTS: 5)

Course objective: This course aims to teach Systems of linear equations and Matrices.

Course Content: Systems of linear equations and Matrices: elementary row operations, echelon forms, Gaussian elimination method, matrices and matrix operations, invertible matrices, diagonal, triangular and symmetric matrices. Determinants: determinants by cofactor expansion, evaluating determinants by row reduction, adjoint and inverse matrices, Cramer's rule. Euclidean vector spaces: Euclidean n -space, linear transformation from $\mathbb{R}^n$ to $\mathbb{R}^m$. General vector spaces: Real vector spaces, subspaces, linear independence, basis and dimensions, row space, column space, and null space, rank and nullity. Inner product spaces: inner products, orthogonality in inner product spaces, orthonormal bases, Cauchy-Schwarz inequality, Gram-Schmidt

orthogonalization, change of bases, orthogonal matrices. Eigenvalues and eigenvectors: Eigenvalues diagonalization.

Campus Orientation (Course type: required; Course code: CAM100 Cr: 0; ECTS:2)

CAM100 is a foundational course designed to help new students transition into university life at Near East University. Through interactive activities, presentations, and educational videos, students will explore the university's history, academic and social opportunities, and the support services available on campus. Key topics include developing effective academic habits, understanding university regulations, fostering social and cultural integration, and embracing the role of academic research. This course is essential for building a strong foundation for academic success and personal growth within the

1st Year | 2nd SEMESTER (SPRING)

Object Oriented Programming (Course type: required; Course code: All108;

Prerequisite: All102; Cr: 3; ECTS: 6)

Course objective: This course provides an in-depth discussion of object-oriented programming and how object-oriented programming can be used in solving real-life problems.

Course Content: This course requires a more advanced use of programming tools (mainly editors and debuggers) that were introduced in ECC102 (Programming and Problem Solving). This course uses Python 3 to teach the fundamental concepts of object-oriented programming. The students are expected to work within a GNU/Linux environment. The course builds upon the knowledge of ECC102 and ECC201 and is the third course in line that uses Python as a programming language. The students who wish to take this course are expected to have a good understanding of basic Python programming, data structures and algorithms.

Calculus II (Course type: required; Course code: MTH102; Prerequisite: MTH101; Cr: 4; ECTS: 6)

Course objective: The aim of this course is to offer the basic fundamentals of needs to apply the principles of mathematical logic, and to use proof techniques such as induction,

and to reason about the efficiency of an algorithm.

Course Content: Plane and polar co-ordinates, area in polar co-ordinates, arc length of curves. Limit, continuity and differentiability of function of several variables, extreme values, method of Lagrange multipliers. Double integral, triple integral with applications. Line integrals, Green's theorem. Sequences, infinite series, power series, Taylor's series. Complex numbers.

Discrete Structures (Course type: required; Course code: All104; Cr: 3; ECTS: 5)

Course objective: The aim of this course is to offer the basic fundamentals of needs to apply the principles of mathematical logic, and to use proof techniques such as induction, and to reason about the efficiency of an algorithm.

Course Content: Sets and Logic, Proofs, Functions, Sequences and Relations, Algorithms, Introduction to Number Theory, Counting Methods and the Pigeonhole Principle, Recurrence Relations, Graph Theory, Trees, Network Models, Boolean Algebras and Combinatorial Circuits, Automata, Grammars and Languages, Computational Geometry.

English II (Course type: required; Course code: ENG102; Prerequisite: ENG101; Cr: 3; ECTS:3)

Course objective: This course aims to bring the students to a level that will enable them to fulfil the requirements of the main courses of the departments.

Course Content: This course offers the students a wide range of grammatical structures and key language and vocabulary of English in the technical, industrial, and scientific sectors at intermediate level for everyday communication at work. The ability to evaluate, analyze and synthesize information in written discourse will be highlighted. Documentation in writing will be introduced at the beginning of the course, in order to solidly establish the skill by the end. Students will learn the discourse patterns and structures to be used in different essay types that they need for real life, hands-on tasks like explaining processes, organizing schedules, reporting or progress, or analyzing risk.

Physics II (Course type: required; Course code: PHY102; Prerequisite: PHY101; Cr: 4; ECTS:6)

Course objective: This course aims to bring the students to a level that will enable them to understand how things work from an electrical point of view.

Course Content: Electrical charges. Coulomb's law. Electrical fields. Gauss's law.

Electrical potential. Capacitance and dielectrics. Current and resistance. Direct current circuits. Magnetic fields. Sources of the magnetic field. Faraday's law of induction.

Inductance and inductors.

CAR100 Career Planning

CAR100 is a foundational course aimed at equipping students with essential career planning skills to navigate the dynamic professional world. Students will explore career development models, learn effective job search techniques, and master the art of CV and cover letter writing. The course emphasizes self-awareness, effective communication, professional networking, and interview preparation. By aligning personal interests, values, and strengths with career goals, students will be empowered to adapt to evolving economic, social, and cultural landscapes and develop a lifelong learning mindset for career success.

GEC351 – 21st Century Skills

Course Description: Aims to develop core thinking skills such as critical, creative, and philosophical thinking; problem-solving; lifelong learning; and effective learning strategies. It also builds social skills including effective communication, teamwork, intercultural interaction, and diversity management. With digital literacy, media awareness, information management, and basic statistics, students are supported to become competent and responsible digital citizens. Self-management skills—self-awareness, emotional intelligence, resilience, and time management—foster individual development; sustainability, ethical leadership, and global citizenship build social responsibility. Finally, applied life skills such as entrepreneurship, financial literacy, stress management, and creative presentation equip students with competencies for real life.

Course Content: Fundamental thinking and learning skills; concepts of critical and

creative thinking; core problem-solving concepts and processes; principles of lifelong learning; logical reasoning; effective learning strategies; components of core thinking skills; methods of philosophical thought; communication and collaboration skills; fundamentals of effective communication and cooperation; basics of intercultural communication; elements shaping communication across cultures; importance of effective communication in collaboration; appropriate techniques for group work; strategies for intercultural interaction; communication problems and solutions in teamwork; innovative communication strategies supporting diversity management; strategies to enhance communication and collaboration in teams; digital literacy and media competencies; information management; basic statistical terms; purposes of digital media tools; interpretation of statistical data; digital tools and platforms; reliability and quality of digital content and sources; creation of original media content; cybersecurity; ethical and philosophical reflections with self-management and cognitive flexibility; time-management strategies; factors of individual and environmental adaptation; components of emotional intelligence; prioritization techniques; resilience in various situations; coping strategies for stress and change; ethics; personality profiles and the impact of emotional intelligence on success; an individual adaptation strategy for stressful situations; empathy-based communication; time management across academic, social, and personal goals; social responsibility and global citizenship; sustainability and environmental awareness; principles of ethical leadership; links between global issues (e.g., climate change, inequality) and social responsibility; relationship between social responsibility projects and sustainability; raising universal awareness; applied life skills; basic entrepreneurship concepts; financial literacy terms; stages of project management.

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Data Structures and Algorithms (Course type: required; Course code: AII201;

Prerequisite: AII108; Cr: 4; ECTS: 6)

Course objective: This course aims to offer understanding the algorithm and data structures used for some problem is much more important than knowing the exact code for it in some programming language.

Course Content: This course comprises an introductory exploration into the design and implementation of Abstract Data Types (ADTs) along with the study of algorithm design and complexity analysis. Even though the discussions during lectures about ADTs are language independent, this course uses Python, a very high-level general programming language, to implement these ideas using object-oriented programming. This class starts with a brief introduction to object-oriented programming.

Logic Design (Course type: required; Course code: AII001; Prerequisite: AII104; Cr: 4; ECTS: 6)

Course objective: This course aims to offer understanding of basic EE abstractions on analysis and design of electrical and electronic circuits and systems. Also, the capability to use abstractions to analyze and design simple electronic circuits.

Course Content: Digital Systems and Information, Combinational Logic Circuits, Combinational Logic Design, Arithmetic Functions and HDLs, Sequential Circuits, Selected Design Topics, Registers and Register Transfers, Memory Basics, Computer Design Basics, Instruction Set Architecture, RISC and CISC Processors, Input-Output and Communication, Memory Systems.

Probability and Statistics (Course type: required; Course code: MTH251; Prerequisite: MTH113; Cr: 3; ECTS: 6)

Course objective: The aim of the course is to provide information to create, simulate, and analyze elementary probability models and to explain the limitations of the statistical inferences made therefrom.

Course Content: Statistics, Data and Statistical Thinking, Methods for Describing Sets of Data, Probability, Random Variables and Probability Distributions, Inferences Based on Samples, Design of Experiments and Analysis of Variance, Categorical Data Analysis, Simple Linear Regression, Multiple Regression and Model Building, Methods for Quality Improvement: Statistical Process Control, Time Series, Nonparametric Statistics.

AII427 - Management for Engineers (course type: elective) (3 Credits – 5 ECTS)

Course objective: This course comprises an introductory exploration of Management.

Course Content: Principles of management. Functions of managers. Organisation and

environment. Marketing management. Production management. Personnel management. Managerial control. Accounting and financial reports. Budgeting and overall control.

YİT101 Turkish as a Foreign Language I (for non-natives)

The course is designed for students who are interested in learning about other cultures and languages, and who have no previous knowledge of Turkish language. This course mainly introduces the student to the Turkish language, through the development of the basic skills: listening, speaking, reading, and writing. Also included is an examination of Turkish culture through an exploration of its historical roots and its most significant social, literary and artistic trends. The goal of the course is that students will gain awareness and appreciation of and insight into Turkish culture.

Software Analysis and Design (Course type: required; Course code: AII020;

Prerequisite: AII108; Cr: 3; ECTS: 5)

Course objective: By the end of this course, students will: Understand the Software Development Life Cycle (SDLC) and when to apply plan-driven vs. agile approaches. Elicit, analyze, and prioritize stakeholder requirements and translate them into a clear SRS. Model processes, data, and behavior using DFD/BPMN, ERD, and UML (use-case, class, sequence, activity, state). Design logical data models and map them to relational schemas with appropriate normalization. Propose system architectures (layered, client–server/MVC) and basic integration patterns. Create UI wireframes/prototypes and apply usability heuristics. Plan verification/validation (unit, integration, system, UAT) and trace requirements to tests. Prepare implementation and transition plans including risk, cost/benefit, and schedule.

Course Content: This course covers principles, methods, and tools used to analyze, design, and deliver information systems. Students learn to elicit and document requirements, model business processes and data, design system architecture and user interfaces, and plan implementation and testing. Emphasis is placed on applying structured and object-oriented techniques (DFD/ERD, BPMN, UML), writing professional artifacts (SRS, design specs, test plans), and using CASE tools to produce solutions that

meet organizational needs for quality, cost, and time.

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Database Systems (Course type: required; Course code: AII202; Prerequisite: AII201; Cr: 4; ECTS: 5)

Course objective: This course aims to cover fundamentals of database architecture, database management systems, and database systems. Principles and methodologies of database design, and techniques for database application development.

Course Content: Introduction to Databases, Relational Data Model and SQL, Conceptual Modeling and Database Design, Models, Database Programming Techniques, Database Normalization Theory, File Structures-Indexing and Hashing, Query Processing-Optimization and Database Tuning, Transaction Processing-Concurrency Control and Recovery, Security and Distribution, Advanced Database Models-Systems and Applications.

AII426 Economics for Engineers (Course type: required; Course code: AII426; Cr: 3; ECTS: 5)

Course objective: The aim of this course is to introduce key conceptual issues in economics. It analyses contemporary global business and finance topics for engineering.

Course Content: Principles and economic analysis of engineering decision making. Cost concept. Economic environment. Price and demand relations. Competition. Make-versus-purchase studies. Principles and applications of money-time relations. Depreciation. Money and banking. Price changes and inflation. Business and company finance.

AII006 - Web Design and Programming (course type: compulsory) (3 Credits – 4 ECTS)

Course objective: The aim of this course is to cover basic and advanced features of Web design.

Course Content: HTML Values and Units, Text Structuring Essentials, Character Formatting Essentials, Lists, Links, Tables, Frames, Forms, Colors and Images, Multimedia, Special Characters, Internationalization and Localization, Scripts, Dynamic HTML, Web Development Software, Publishing a Site, An Introduction to XML, Creating Mobile Documents, Tidying and Validating Documents, CSS Basics, Style Definitions,

CSS Values and Units, CSS Inheritance and Cascade, Font Properties, Text Formatting, CSS Lists, Padding, Margins, and Borders, Colors and Backgrounds, CSS Layouts, Pseudo-Elements and Generated Content, Dynamic HTML with CSS, Media Styles and Defining Documents for Printing, User Interface Styles, Testing and Validating CSS.

Prerequisite: AII102

Project Management (Course type: required; Course code: ISE206; Cr: 2; ECTS: 4)

Course objective: To develop students' ability to effectively plan, execute, monitor, and manage projects by applying project management principles, tools, and best practices.

Course Content: This course provides an overview of the key concepts, methodologies, and tools used in project management. Topics include project life cycle, scope management, time and cost estimation, risk analysis, resource allocation, and stakeholder communication. Students will gain practical skills through case studies and project planning exercises aligned with industry standards such as PMI's PMBOK.

AII007 - Multimedia Systems (course type: compulsory) (3 Credits – 4 ECTS)

Course objective: The aim of this course is to introduce students to Multimedia Systems.

Course Content: Introduction to Computer Science and Media Computation, Introduction to Programming in Python, Modifying Pictures Using Loops, Modifying Pixels in a Range, Advanced Picture Techniques, Modifying Sounds Using Loops, Modifying Samples in a Range, Making Sounds by Combining Pieces, Building Bigger Programs, Creating and Modifying Text, Advanced Text Techniques: Web and Information, Making Text for the Web, Creating and Modifying Movies, Speed, Functional Programming, Object-Oriented Programming. Prerequisite: AII102, MTH113

YIT102 Turkish for Foreigners II (course type: only for Foreign Students) (2 Credits)

Course objective: The aim of this course is to introduce Turkish Language for Foreign Students of NEU. Course Content: Vocabulary of the Turkish (Recognition of words as words, relations between words), sentence information (sentence organizations, general structure and sentence types), reading writing (reading rules and writing techniques, spelling rules, comprehension of speech and writing language, spelling rules.), reading comprehension (reading comprehension techniques, texts), applications on the texts

suitable for their own professions. speech (learning the techniques of speech, specific emphasis, learning of the forms such as intonation on appropriate texts)
Prerequisite: YIT101

ISE299 Summer Practice I (Course type: required) (0 Credits)

Course objective: This course provides real working life experience for students.

Students will be able to apply their theoretical knowledge into practice.

Course Content: A minimum of 20 working days for this practice is required in a manufacturing or service organization. This one can involve 20 working days minimum.

Prerequisite: --

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Technical Report Writing and Presentation (Course type: required; Course code: ENG201; Prerequisite: ENG102; Cr: 3; ECTS: 4)

Course objective: This course aims to offer critical technical writing and presentation skills for students for their future and professional lives.

Course Content: To reinforce and consolidate the language and 4 skills that students have learned from earlier courses, as well as developing their level of knowledge, communicative capacity, and ability to analyse and reflect on language. Courses on upper-intermediate AND ADVANCED levels include interesting and up-to-date topics, encouraging students to recognize the importance of acquiring a foreign language in a modern context; prepare them to for their future professional life.

Programming Languages I (Course type: required; Course code: AII004; Prerequisite: AII202; Cr: 3; ECTS: 7)

Course objective: The aim of the course is to introduce students to visual programming languages.

Course Content: Introduction to Visual Studio, An In-Depth Look at The IDE, Writing and Working With Code, Introducing the Object Automation Model, Extending and Customizing the Code Editor, Writing Macros, Writing Add-Ins and Wizards, Creating Enterprise Applications.

Operating Systems (Course type: required; Course code: AII302; Prerequisite: AII201; Cr: 3; ECTS: 6)

Course objective: This course intends to generally understand the structure of modern computers, purpose, structure and functions of operating systems, and illustration of key OS aspects by example.

Course Content: Principles of operating systems. Memory management.

Multiprocessing. Virtual memory concepts. Memory protection. Scheduling. Process management. Time-slicing and priorities, deadlocks, and process synchronization.

Peripheral control. Filing system management. Resource control and monitoring. Linux and Windows Operating Systems.

Management Information Systems (Course type: required; Course code: AII311; Prerequisite: AII427; Cr: 4; ECTS: 7)

Course objective: This course aims to offer the roles played by information technology in today's business and define various technology architectures on which information systems are built. Define and analyze typical functional information systems and identify how they meet the needs of the firm to deliver efficiency and competitive advantage.

Course Content: This course covers management principles and managerial functions; organization and its interaction with the environment; marketing management; production management; personnel (human resources) management; managerial control; and budgeting and control within the framework of accounting and financial reports.

AII439 - Occupational Health and Safety (course type: compulsory) (2 Credits – 4 ECTS)

Course objective: To provide students with essential knowledge and awareness of workplace health and safety principles, regulations, and practices to promote a safe working environment.

Course Description: This course introduces the fundamental concepts of occupational health and safety, including hazard identification, risk assessment, accident prevention, safety regulations, and emergency procedures. It aims to develop students' understanding of the responsibilities of employers and employees in ensuring

workplace safety and compliance with legal standards.

AIT103/AIT101

Course Description: Examines the early social, economic, political, institutional, and cultural dynamics of the Ottoman Empire to provide the historical background of the Republic of Turkey. It analyzes political dynamics and modernization efforts, explaining the key concepts of the History of the Revolution, the conditions of the early 20th century, the final period of the Empire, WWI, and the preparatory phase of the National Struggle.

Course Content: Brief political history of the Ottoman Empire (1300–1914); decline and modernization; the classical period state and society; organization of the National Resistance (Amasya Circular, Erzurum and Sivas Congresses); occupations; Mustafa Kemal and the National Resistance; the Ottoman Empire in WWI; Armistice of Mondros; Treaty of Sèvres; the War of Independence against Armenian and Greek forces; Armistice of Mudanya; Treaty of Lausanne.

3rd Year | 2nd SEMESTER (SPRING)

CHC100 Cyprus History and Culture

CHC100 is a comprehensive course designed for first-year students to explore the rich historical, cultural, and social heritage of Cyprus. This course covers the island's geography, biodiversity, and historical periods, from prehistoric times to modern developments. It delves into the Ottoman and British colonial influences, the evolution of education, art, and literature, and the socio-political dynamics that shaped the island's identity. Students will gain a deep understanding of the Mediterranean's cultural interplay and Cyprus's role as a bridge between East and West, fostering an appreciation for its unique heritage and environment.

Software Engineering (Course type: required; Course code: AII003; Prerequisite: AII104; Cr: 3; ECTS: 6)

Course objective: The objective of the course is to provide the student with necessary background of software engineering, principles and programming.

Course Content: Principles of software engineering: Requirements, design and testing.

Review of principles of object orientation. Object oriented analysis using UML. Frameworks and APIs. Introduction to the client-server architecture. Analysis, design and programming of simple servers and clients. Introduction to user interface technology.

Web Application Development (course type: elective; Course code: CS322;

Prerequisite: AII006; Cr: 3; ECTS: 4)

Course objective: The aim of this course is to provide advanced knowledge about Web applications.

Course Content: Beginning server programming using PHP, Expressions and Control Flow in PHP, PHP Functions-Objects and Arrays, MySQL, Accessing MySQL Using PHP, Form Handling, Cookies, Sessions and Authentication, JavaScript, JavaScript Functions-Objects and Arrays, AJAX and Web Services.

Geographic Information Systems (course type: required; Course code: ISE301; Cr: 4; ECTS: 5)

Course objective: The aim of the course is to provide knowledge about GIS.

Course Content: What is a GIS, GIS's Roots in Cartography, Maps as Numbers, Getting the Map into the Computer, on the Surface, Making Maps with GIS, How to Pick a GIS, GIS in Action, The Future of GIS.

Data Communications and Networking (Course type: required; Course code: AII303;

Prerequisite: AII001; Cr: 4; ECTS: 5)

Course objective: This course aims to provide the knowledge and skills required to design, model, and effectively operate secure and dependable digital IP-based networks. It will provide an opportunity to gain a sound understanding of the internet protocol suite that forms the core for current data networks. The fusion of the internet world and multimedia is also addressed, as well as wireless communications.

Course Content: Introduction to Computer Networks and Data Communications, Fundamentals of Data and Signals, Conducted and Wireless Media, Making Connections, Making Connections Efficient, Errors, Error Detection and Error Control,

Local Area Networks, Introduction to Metropolitan Area Networks and Wide Area Networks, The Internet, Voice and Data Delivery Networks, Network Security, Network Design and Management.

AIT104/AIT102

Course Description: Aims to develop students' ability to classify, define, explain, and analyze current social and individual issues in Turkey through rationality, science, and modernity, from the perspective of Kemalist thought and the Turkish Revolution.

Course Content: Discussion of "revolution," "evolution," and major revolutions in history; transformation of the political system (from Sultanate to Republic); changes in education and cultural life; attempts at multi-party rule and consolidation of single-party governance; Kemalism and the Six Principles (Republicanism, Nationalism, Populism, Statism, Secularism, Reformism); debate on whether the Sheikh Said Rebellion was a reaction to secular policies or Kurdish nationalism; Turkey during WWII; Turkey's position in the League of Nations and regional organizations; Turkish foreign policy and key issues; statism, republicanism, reformism.

Summer Practice (course type: required; course code: ISE399)

Course objective: This course provides real working life experience for students.

Students will be able to apply their theoretical knowledge into practice.

Course Content: A minimum of 40 working days for this practice is required in a manufacturing or service organization.

4th Year | 1st SEMESTER (FALL)

Principles of Information Security (Course type: required; Course code: AII430;

Prerequisite: AII303; Cr: 3; ECTS:6)

Course objective: The aim of this course is to provide an understanding of the key themes and principles of information security and be able to apply these principles in designing solutions to managing security risks effectively. Also, understand how to apply the principles of information security in a variety of contexts.

Course Content: Introduction to Information Security, The Need for Security, Legal, Ethical, and Professional Issues in Information Security, Risk Management, Planning for

Security, Security Technology, Cryptography, Physical Security, Implementing Information Security, Security and Personnel, Information Security Maintenance.

Graduation Project I (Course type: required; Course code: ISE491; Cr: 3; ECTS: 4)

Course objective: This course aims that each student must choose an individual topic or theme on which he/she would like to do a scientific research project.

Course Content: In this course every student will do a project in the industrial engineering area to apply their technical knowledge and develop their professional abilities.

eGovernment (course type: compulsory; Course code: AII428; Cr:3; ECTS: 5)

Course objective: The aim of the course is to explain the eGovernment Systems to students.

Course Content: Understanding eGovernment, Approaches to Management of eGovernment Systems, eGovernment Strategy, Managing Public Data, Core Management Issues for eGovernment, Emerging Management Issues for eGovernment, eGovernment System Lifecycle and Project Assessment, Analysis of Current Reality, Design of the New eGovernment System, eGovernment Risk Assessment and Mitigation, eGovernment System Construction, Implementation and Beyond, Developing eGovernment Hybrids, Overall picture of the situation and progress of eGovernment and eInclusion in European countries, Local editions of the ePractice factsheets, European eID.

Artificial Intelligence Applications (course type: compulsory; Course code: AII452; Cr: 3; ECTS: 5)

Course objective: To introduce students to real-world applications of artificial intelligence and provide hands-on experience in developing AI-driven solutions across various domains.

Course Description: This course explores the practical implementation of artificial intelligence techniques in areas such as healthcare, finance, robotics, natural language processing, and smart systems. Students will gain insight into machine learning, computer vision, expert systems, and AI tools through case studies and projects.

Emphasis is placed on understanding how AI transforms industries and how to apply AI.

Safety in Informatics (course type: compulsory; Course code: AII010; Cr: 2; ECTS: 3)

Course objective: To raise awareness and promote best practices for maintaining physical and mental well-being in computer-based work environments.

Course Description: This course explores occupational health concerns specific to informatics and digital workspaces. Topics include ergonomics in computer use, prevention of repetitive strain injuries, digital eye strain, posture and workstation design, work-related stress, and strategies for digital well-being. Students will learn how to create healthier and more sustainable work habits in technology-driven environments, distinct from traditional occupational safety topics. methods to solve real-life problems.

4th Year | 2nd SEMESTER (SPRING)

Graduation Project II (Course type: required; Course code: ISE492; Prerequisite: ISE491; Cr: 3; ECTS: 5)

Course objective: This course aims to critically evaluate and assess the student's projects via oral presentations and written technical reports.

Course Content: This course is the second part of the Graduation Project. In this course every student will do a project in the industrial engineering area to apply their technical knowledge and develop their professional abilities.

Software Testing (Course type: required; Course code: AII422; Cr: 3; ECTS: 4)

Course objective: The aim of this course is to inform the students about Understanding the fundamental concepts and theory of Software testing and Software Quality Management Implement process that ensures the Software is developed with good quality standards.

Course Content: Quality: how to assure it and verify it, and the need for a culture of quality. Avoidance of errors and other quality problems. Inspections and reviews.

Testing, verification and validation techniques. Process assurance vs. Product assurance. Quality process standards. Product and process assurance. Problem analysis and reporting. Statistical approaches to quality control.

Engineering Ethics (Course type: required; Course code: AII429; Cr: 3; ECTS: 5)

Course objective: This course aims to deal with different aspects of the International Political Economy, which is concerned with the interconnectedness of various areas such as economics, politics, history, sociology, etc.

Course Content: In the first part of this course, we will introduce the fundamental paradigms of IPE by looking at the three different theoretical perspectives: mercantilism, liberalism, and structuralism. In the second part of the course, we will analyze structural connections of IPE, leading to sections that explore international trade, international finance, international institutions and global problems.

Technical Electives:

AII002 System Simulation (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to teach students how to use simulation as a tool for problem solving.

Course Content: Viewing simulation as a problem-solving tool. Simulation models and the classification of simulation techniques. Discrete and continuous system structures. Stages of a simulation experiment. Simulation experiments with random events and sequencing systems. Simulation languages and their characteristics. Examples of simulation programming.

AII404 Neural Networks (course type: elective) (3 Credits – 5 ECTS)

Course objective: Teaching the basics of neural networks. To illustrate the basic applications of neural networks using Matlab. To give the principles of neural networks approaches.

Course Content: The Neural network paradigm and fundamentals. Training by error minimization. Back propagation algorithms. Feedback and recurrent networks. Hopfield network, Genetic algorithms. Probability and neural networks. Optimizations and constraints.

AII406 System Programming (course type: elective) (3 Credits – 5 ECTS)

Course objective: To study the function of the common operating system kernel routines that are provided by an operating system and accessible from a systems programming

language. Design, write, and test moderately complicated low-level programs using a systems programming language. Proficiently use a preprocessor to implement code that is portable between different computing platforms. Use operating system kernel calls from within a programming language to allocate/free virtual memory, initiate and synchronize multiple threads/processes, interact with the file system, set and respond to timers/interrupts.

Course Content: Introduction to system programming, operating systems and fundamental concepts of programming language processors, one and two pass assemblers, symbol tables, compilers and compiler design, parsing, syntax and semantic phases, optimization, relocatable and linkable loaders, operating systems design principles

All005 Internet Programming (course type: elective) (3 Credits – 5 ECTS)

Course objective: The main aim of this course is to be familiar with the main uses of the Internet as the primary modern technology for online communication, understand the generic principles of computer programming as applied to implementing basic web-based applications.

Course content: Internet concepts. HTML programming principles. Graphical User Interface design principles. Using ASP to develop internet applications. Uploading and testing internet applications.

All413 Introduction to Artificial Intelligence (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to introduce students to the fundamental concepts, methods, and application areas of artificial intelligence. Within the scope of the course, students will understand basic AI approaches such as search strategies in artificial intelligence, fuzzy logic, neural networks, expert systems, and probabilistic reasoning. Students will also become familiar with different artificial intelligence programming languages and analyze how these approaches are applied to real-world problems.

Course Description: This course serves as an introduction to artificial intelligence and focuses on search strategies in AI, fuzzy logic and fuzzy sets, artificial neural networks and learning processes, the NeroSell program, expert systems, and programming

languages for artificial intelligence. In addition, the course covers hybrid systems, probabilistic uncertainty reasoning, belief networks, and distributed artificial intelligence.

All408 Advanced Object-Oriented Programming (course type: elective) (3 Credits – 5 ECTS)

Course objective: Teaching object-oriented programming using C# (C sharp). To develop students' skills and dispositions regarding problem analysis and development of different projects using object-oriented programming. To show the advantages of object-oriented programming and visual programming in project development. To teach inheritance, multiple inheritance, polymorphism, operator overloading and implement them in examples using C sharp. Development of different programs using aggregation, delegates, Events. To teach the design of windows applications using object-oriented and visual programming.

Course Content: Modeling the real world using object-oriented software. Overview of the .NET Framework. Components and Languages in the .NET. Structure of a C# Program. Input/Output. Console class, Namespace, Generating Extensible Markup Language (XML) document. Data Types. Control Statements. Methods, Parameters. Overloaded Methods. C# and Object Orientation, Classes and Objects, Encapsulation, Constructors, Creating and Destroying Objects, Destructors, Inheritance, Interfaces, Aggregation, Namespaces, Modules, Operator Overloading, Delegates, Events. Windows Forms Class Hierarchy, Properties, Events, Controls, Dialogs, Menus, Multiple Document Interface, Data Access and Data Binding, DataGridView, ADO.NET, .NET Data Providers, Interacting with XML Data, .NET controls.

All409 Object-oriented Programming Language II (course type: elective) (3 Credits – 5 ECTS)

Course objective: Design, compile and run Java applications and applets. Understand the role of the Java Virtual Machine in achieving platform independence. Use the Object-Oriented paradigm in design of Java programs. Understand the division of classes into Java packages. Use exceptions to handle run time errors. Use threads in order to create more efficient Java programs. Design Java applications with database access.

Course Content: Introduction to Java. Java and object-oriented programming. Introduce advanced Java concepts – inheritance, polymorphism, abstract classes, exception handling, use of collections and database connectivity. Gain more practical experience by designing and writing Java applications. Components of Java projects. Designing Graphic User Interface GUI. Java Internet applications. Java applets.

All417 Mobile Programming (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of the course is to give the basics of mobile programming.

Course Content: Getting Mobile, Starting Your Mobile Site, Adapting to User Devices, Developing Standards- Compliant Sites, Sending Text Messages, Adding Spice to Messages: MMS, Making Money via Mobile Devices, Interactive Voice, Mobile AJAX, Mobile Web.

All407 Programming Languages II (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to introduce students to the Delphi programming environment and its fundamental components. Within the scope of the course, students will gain knowledge and skills related to the organization of forms and units, the use of the Object Inspector, the role of code in Delphi, the use of the component's palette, and the management of component properties. In addition, students will be able to develop basic database-driven and Windows-based applications.

Course Description: This course serves as an introduction to Delphi programming and covers the organization of forms and units, the structure and use of the Object Inspector, coding in Delphi, and component management. The course also includes the file structure of Delphi projects, text files, database formats, and the development of simple database applications. Furthermore, the integration of Windows-based applications into Delphi projects, data access methods, and the development of Access-based applications using DB Navigator are addressed.

All431 E-commerce (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of the course is to prepare students for design e-commerce sites.

Course Content: Starting an E-Commerce Site, Laying Out the Foundations, Starting a Project, Creating the Product Catalog, Product Attributes, Search Engine Optimization, Searching the Catalog, Receiving Payments Using PayPal, Catalog Administration, Creating Shopping Cart, Implementing AJAX Features, Accepting Customer Orders, Product Recommendations, Managing Customer Details, Storing Customer Orders, Implementing the Order Pipeline, Processing Credit Card Transactions, Product Reviews, Using Web Services.

All412 Database Application (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to provide students with fundamental knowledge and skills related to database concepts, database management systems, and the development of database applications.

Course Content: This course covers fundamental database concepts, the relational database model, the SQL language, table creation and management, data insertion, update and deletion operations, querying techniques, and the development of simple database applications. Prerequisite:

All426 Economics for Engineers (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to introduce key conceptual issues in economics. It analyses contemporary global business and finance topics for engineering.

Course Content: Principles and economic analysis of engineering decision making. Cost concept. Economic environment. Price and demand relations. Competition. Make-versus-purchase studies. Principles and applications of money-time relations. Depreciation. Money and banking. Price changes and inflation. Business and company finance.

All006 - Web Design and Programming (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to cover basic and advanced features of Web design.

Course Content: HTML Values and Units, Text Structuring Essentials, Character Formatting Essentials, Lists, Links, Tables, Frames, Forms, Colors and Images, Multimedia, Special Characters, Internationalization and Localization, Scripts, Dynamic HTML, Web Development Software, Publishing a Site, An Introduction to XML, Creating

Mobile Documents, Tidying and Validating Documents, CSS Basics, Style Definitions, CSS Values and Units, CSS Inheritance and Cascade, Font Properties, Text Formatting, CSS Lists, Padding, Margins, and Borders, Colors and Backgrounds, CSS Layouts, Pseudo-Elements and Generated Content, Dynamic HTML with CSS, Media Styles and Defining Documents for Printing, User Interface Styles, Testing and Validating CSS.

Prerequisite: AII102

AII007 - Multimedia Systems (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to introduce students to Multimedia Systems.

Course Content: Introduction to Computer Science and Media Computation, Introduction to Programming in Jython, Modifying Pictures Using Loops, Modifying Pixels in a Range, Advanced Picture Techniques, Modifying Sounds Using Loops, Modifying Samples in a Range, Making Sounds by Combining Pieces, Building Bigger Programs, Creating and Modifying Text, Advanced Text Techniques: Web and Information, Making Text for the Web, Creating and Modifying Movies, Speed, Functional Programming, Object-Oriented Programming. Prerequisite: AII102, MTH113

SWE488 Software Implementation (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to provide students with both theoretical and practical knowledge related to software implementation. The course focuses on the software development lifecycle from an applied perspective, enabling students to gain competencies in coding practices, software quality assurance, testing methodologies, and software security. Students will also analyze the impact of modern software tools and techniques on real-world applications.

Course Description: This course offers a practical and application-oriented approach to software implementation. It covers the software development lifecycle with an emphasis on coding standards, quality assurance, testing methodologies, and software security. Through case studies and hands-on examples, students will experience the design, development, and evaluation of software systems in real-world contexts.

Human Computer Interaction (course type: elective) (3 Credits – 5 ECTS)

Course objective: The main objective is to perform analysis, establish requirements, design, and evaluate interactive computer-based systems and products. The purpose of this course is to give the student basic knowledge about human-computer interaction. It will discuss how to understand human cognition and human perspective by working with computers.

Course content: Psychological principles of human-computer interaction. Evaluation of user interfaces. Usability engineering. Task analysis, user-centred design, and 44 prototyping. Conceptual models and metaphors. Software design rationale. Design of windows, menus, and commands. Voice and natural language I/O. Response time and feedback. Colour, icons, and sound. Internationalization and localization. User interface architectures and APIs. Case studies and projects.

ISE412 Health Information Management (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to give details about information systems used in health services.

Course Content: Health Care Delivery Systems, Health Information Management Professionals, Health Care Settings, The Patient Record, Electronic Health Records, Content of the Patient Record, Numbering Filing Systems and Record Storage and Circulation, Indexes, Registers and Health Data Collection, Legal Aspects of Health Information Management, Coding and Reimbursement.

ISE413 Strategic Information Systems Management (course type: elective) (3 Credits – 5 ECTS)

Course Objective: The aim of this course is to give details about strategic information systems.

Course Content: Business Strategy for the Digital World, Business Exploitation of Information and Communication Technology, Information Systems Development Approaches, Disruptive Technologies and Applications, Business IT/IS Alignment, Strategic IS/IM in Context, Global Issues in Information Management, Strategic Knowledge Management, Organizational Change, Culture and Strategic IS/IT Led Change, IS/IT Benefits Management and Realization, Strategic IT/IS Leadership and IT

Governance, IT/IS Professionalism.

ISE414 Information in Hospitality and Tourism (course type: elective) (3 Credits – 5 ECTS)

Course Objective: The aim of this course is to give details about information systems used in Tourism.

Course Content: The Internet and the World of Hospitality and Tourism, The Internet Revolution: Brief History and Basics, The Internet as a Means of Communication, The Internet as a Means of Commerce, The Internet as a Means for Information Distribution, The Internet as a Means for Travel and Hospitality Research, The Internet as a Means for Marketing, The Impact of the Internet on Travel and Hospitality Industry, The Future of the Travel Agents, The Travel and Hospitality Industry in the 21st Century.

ISE415 Accounting Information Systems (course type: elective) (3 Credits – 5 ECTS)

Course Objective: The aim of this course is to give details about accounting information systems.

Course Content: Introduction to Accounting Information Systems, Enterprise Systems, Electronic Business Systems, Documenting Information Systems, Database Management Systems, Relational Databases and SQL, Controlling Information Systems, The Order Entry/Sales (OE/S) Process, The Billing/Accounts Receivable/Cash Receipts (B/AR/CR) Process, The Purchasing Process, The Accounts Payable/Cash Disbursements (AP/CD) Process, The Human Resources (HR) Management and Payroll Processes, Integrated Production Processes (IPP), The General Ledger and Business Reporting (GL/BR) Process, Acquiring and Implementing Accounting Information Systems.

AI402 Computer Graphics (course type: elective) (3 Credits – 5 ECTS)

Course Objectives: The objective of this course is to provide students with fundamental and advanced knowledge of computer graphics principles and techniques. The course aims to develop students' ability to understand graphical data representations, geometric transformations, and rendering processes used in two- and three-dimensional graphics systems. By the end of the course, students are expected

to design and implement basic graphical applications, apply mathematical concepts to visual computing problems, and use modern graphics tools and programming techniques to create interactive visual content.

Course Content: This course covers the fundamentals of computer graphics, including raster and vector graphics, color models, and image representation. Topics include two-dimensional and three-dimensional geometric transformations, viewing and projection techniques, lighting and shading models, texture mapping, and basic animation concepts. The course also introduces graphics pipelines, graphical user interfaces, and graphics programming using contemporary libraries or frameworks. Practical applications focus on implementing graphical algorithms and developing simple interactive visual systems.

All405 Computer Hardware (course type: elective) (3 Credits – 5 ECTS)

Course Objectives: The objective of this course is to introduce students to the fundamental structure, operation, and organization of computer hardware systems. The course aims to enable students to understand how hardware components interact with software and operating systems. Upon successful completion of the course, students are expected to analyze hardware architectures, identify the functions of key components, and evaluate hardware performance and compatibility in information systems environments.

Course Content: This course examines the basic components of computer systems, including central processing units, memory hierarchy, input/output devices, storage technologies, and system buses. Topics include instruction execution, data representation, computer arithmetic, and basic digital logic concepts. The course also addresses system architectures, peripheral devices, hardware–software interaction, and emerging hardware technologies. Practical sessions focus on hardware configuration, troubleshooting, and performance considerations in modern computing systems.

ISE428 Forensic Information Systems (course type: elective) (3 Credits – 5 ECTS)

Course Objectives: The objective of this course is to provide students with theoretical knowledge and practical skills in the field of digital and information systems forensics.

The course aims to equip students with the ability to collect, preserve, analyze, and interpret digital evidence in accordance with legal and ethical standards. By the end of the course, students are expected to understand forensic investigation processes and apply forensic techniques to information systems security incidents.

Course Content: This course introduces the principles of digital forensics, including the forensic investigation lifecycle, evidence handling, and chain of custody. Topics include computer and network forensics, file system analysis, log analysis, malware investigation, and incident response. Legal and ethical considerations related to digital evidence and cybercrime are also discussed. Practical applications involve case studies, forensic tools, and techniques used in real-world information systems investigations.

All351 Embedded Systems (course type: elective) (3 Credits – 5 ECTS)

Course Objectives: The objective of this course is to provide students with a comprehensive understanding of embedded systems design and implementation. The course aims to develop students' ability to design, program, and integrate hardware and software components in embedded environments. Upon completion of the course, students are expected to analyze embedded system requirements, develop embedded applications, and apply real-time constraints in system design.

Course Content: This course covers the fundamentals of embedded systems, including microcontroller architectures, input/output interfacing, sensors and actuators, and embedded programming. Topics include real-time operating systems, timing and scheduling, communication protocols, and power management. The course emphasizes hardware–software co-design and practical implementation through laboratory experiments and project-based applications involving embedded platforms.

All419 Image processing (course type: elective) (3 Credits – 5 ECTS)

Course objective: The aim of this course is to introduce students to the fundamental techniques, concepts, and methods of image processing and image analysis. Students will learn the entire pipeline, from how an image is acquired to the processes of enhancing it, analyzing it, and extracting meaningful information such as objects and features.

Course Content: Imaging sensors and their principles, how images are digitally

represented, stored, and compressed. Techniques for noise reduction and improving image clarity through contrast manipulation, histogram equalization, and edge highlighting. Mathematical techniques for image processing, including two-dimensional Fourier transforms, wavelets, and convolution. Methods for partitioning an image into meaningful regions (e.g., object and background) using techniques like thresholding. Morphological Operations. Feature Extraction. Object Recognition and Tracking.

All415 Decision Making (course type: elective) (3 Credits – 5 ECTS)

Course objective: The fundamental aim of this course is to provide students with a comprehensive understanding of the theory and practice of the decision-making process. It aims to equip them with the necessary knowledge and skills to make the most effective and sound decisions in both individual and group settings by making them competent in analyzing situations involving risk and uncertainty, utilizing critical thinking, and applying quantitative models such as decision trees.

Course Content: Introduction to decision making. Decision making process. Decision making under uncertainty. Utility theory. Risk theory, under uncertainty. Risk aversion. Decision making under conflict. Queuing theory. Decision Trees. Decision Trees. Under uncertainty. Multiple regression models. Exponential smoothing. Group decision making. Linear regression model and correlation. Time series. Forecast accuracy. Nonlinear models for forecasting.

All461 Generative AI (course type: elective) (3 Credits – 5 ECTS)

Course objective: This course introduces the fundamental concepts and modern applications of generative artificial intelligence. Students will gain an understanding of how generative models work, explore their mathematical foundations, and learn to apply them in diverse fields such as image, text, and audio generation. The course aims to develop both theoretical knowledge and practical skills for designing and evaluating generative AI systems.

Course Content: Overview of generative AI and its historical development. Probabilistic modeling and key mathematical foundations. Generative Adversarial Networks (GANs) and their variants. Variational Autoencoders (VAEs). Diffusion models and recent advancements. Applications in natural language processing, computer vision, and

creative industries. Ethical considerations, societal impact, and responsible use of generative AI. Hands-on laboratory sessions with modern frameworks and tools.

Common Compulsory Courses Offered University-wide

ENG101

Course Description: Designed for English-medium departments, ENG101 develops students' ability to understand and respond to everyday dialogues and contexts in English-speaking environments. Meaning and communication are prioritized; grammar supports communication. Content is supported with visual, audio, and written materials and 57 tailored to each topic. ENG101 targets A1 (CEFR).

Course Content: 1. Introducing oneself 2. Giving personal information 3. Giving personal information 4. Talking about objects 5. Talking about family 6. Describing and discussing buildings and furniture 7. Talking about timetables/schedules 8. Talking about daily routines 9. Talking about daily routines 10. Ability 11. Asking for and giving directions 12. Talking about food and quantities

ENG102

Course Description: Designed for English-medium departments, ENG102 further develops the ability to understand and respond to everyday dialogues and contexts. Meaning and communication are prioritized; grammar is instrumental. Content is supported with visual, audio, and written materials and tailored per topic.

TUR101

Course Description: Teaching the Turkish language in accordance with its rules.

Course Content: 1. Definition and importance of language 2. Written language and its features 3. Modes of expression 4. Points of view and approaches 5. Punctuation I 6. Punctuation II 7. Expression disorders 8. Midterm 9–13. Written composition genres 14. Final exam

AİT103/AİT101

Course Description: Examines the early social, economic, political, institutional, and cultural dynamics of the Ottoman Empire to provide the historical background of the Republic of Turkey. It analyzes political dynamics and modernization efforts, explaining

the key concepts of the History of the Revolution, the conditions of the early 20th century, the final period of the Empire, WWI, and the preparatory phase of the National Struggle.

Course Content: Brief political history of the Ottoman Empire (1300–1914); decline and modernization; the classical period state and society; organization of the National Resistance (Amasya Circular, Erzurum and Sivas Congresses); occupations; Mustafa Kemal and the National Resistance; the Ottoman Empire in WWI; Armistice of Mondros; Treaty of Sèvres; the War of Independence against Armenian and Greek forces; Armistice of Mudanya; Treaty of Lausanne.

AIT104/AIT102

Course Description: Aims to develop students' ability to classify, define, explain, and analyze current social and individual issues in Turkey through rationality, science, and modernity, from the perspective of Kemalist thought and the Turkish Revolution.

Course Content: Discussion of "revolution," "evolution," and major revolutions in history; transformation of the political system (from Sultanate to Republic); changes in education and cultural life; attempts at multi-party rule and consolidation of single-party governance; Kemalism and the Six Principles (Republicanism, Nationalism, Populism, Statism, Secularism, Reformism); debate on whether the Sheikh Said Rebellion was a reaction to secular policies or Kurdish nationalism; Turkey during WWII; Turkey's position in the League of Nations and regional organizations; Turkish foreign policy and key issues; statism, republicanism, reformism.

CAR100

Course Description: Aims to introduce career methods that help students adapt to rapidly changing economic, social, cultural, ethical, and legal conditions of the business world and to develop the ability to apply these methods in their own lives.

Course Content: Introduction: the concept and stages of career; employer expectations from new graduates; organizational career management and models; individual career planning and goal setting; job-search techniques; individual career planning applications: cover letter and CV; basic communication skills; individual career planning applications: interview preparation; interview techniques; orientation and transition to

work life; lifelong learning.

CAM100

Course Description: Organized to help students better get to know university life, this course consists of activities aimed at gaining the Near Eastern identity and adapting more easily to university life.

Course Content: History and general information of Near East University; information about faculties; advising and academic processes; digital/distance education and use of UZEBİM; accessing and managing information; information about university-wide common and elective courses; creating a study plan and developing academic study habits; academic ethics and scientific approach; social life and the Office of the Dean of Students; health services and hospital facilities; Cyprus culture and adaptation; scientific research and activities; assessment and evaluation; communication skills and interpersonal relations management.

CHC100

Course Description: As above, it provides comparative analysis of Cyprus's changing dynamics and helps understand the Mediterranean basin.

Course Content: General information on the history and culture of Cyprus; zoology and botany; social and cultural life in antiquity and the Middle Ages; the island's social and cultural heritage in the Ottoman period; art history; religion and culture; the British administration; history of education in Cyprus; political events between 1950–1974; the existential struggle of Turkish Cypriots; the establishment of the TRNC and its social structure.

GEC351 – 21st Century Skills

Course Description: Aims to develop core thinking skills such as critical, creative, and philosophical thinking; problem-solving; lifelong learning; and effective learning strategies. It also builds social skills including effective communication, teamwork, intercultural interaction, and diversity management. With digital literacy, media awareness, information management, and basic statistics, students are supported to

become competent and responsible digital citizens. Self-management skills—self-awareness, emotional intelligence, resilience, and time management—foster individual development; sustainability, ethical leadership, and global citizenship build social responsibility. Finally, applied life skills such as entrepreneurship, financial literacy, stress management, and creative presentation equip students with competencies for real life.

Course Content: Fundamental thinking and learning skills; concepts of critical and creative thinking; core problem-solving concepts and processes; principles of lifelong learning; logical reasoning; effective learning strategies; components of core thinking skills; methods of philosophical thought; communication and collaboration skills; fundamentals of effective communication and cooperation; basics of intercultural communication; elements shaping communication across cultures; importance of effective communication in collaboration; appropriate techniques for group work; strategies for intercultural interaction; communication problems and solutions in teamwork; innovative communication strategies supporting diversity management; strategies to enhance communication and collaboration in teams; digital literacy and media competencies; information management; basic statistical terms; purposes of digital media tools; interpretation of statistical data; digital tools and platforms; reliability and quality of digital content and sources; creation of original media content; cybersecurity; ethical and philosophical reflections with self-management and cognitive flexibility; time-management strategies; factors of individual and environmental adaptation; components of emotional intelligence; prioritization techniques; resilience in various situations; coping strategies for stress and change; ethics; personality profiles and the impact of emotional intelligence on success; an individual adaptation strategy for stressful situations; empathy-based communication; time management across academic, social, and personal goals; social responsibility and global citizenship; sustainability and environmental awareness; principles of ethical leadership; links between global issues (e.g., climate change, inequality) and social responsibility; relationship between social responsibility projects and sustainability; raising universal awareness; applied life skills; basic entrepreneurship concepts; financial literacy terms; stages of project management.