Faculty of Artificial Intelligence and Informatics

Information Systems Engineering Department

Bachelor's Degree Program

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1. GENERAL INFORMATION ABOUT THE FACULTY

1.1. ESTABLISHMENT OF THE FACULTY

A) History and Academic Processes of the Faculty

The Near East University Faculty of Artificial Intelligence and Informatics was established in 2025 and began its educational activities in the same year. Turkish citizens are admitted to the faculty's programs through the Student Selection and Placement Examination (ÖSYM) in line with the direction of the Council of Higher Education (YÖK). The Faculty of Artificial Intelligence and Informatics was founded with the vision of becoming a leading institution in the field of artificial intelligence and informatics worldwide, integrating research and education through a student-centered approach and possessing international academic standards. The faculty offers undergraduate, master's, and doctoral programs, in both Turkish and English.

B) Educational Policy and Academic Objectives

The Faculty of Artificial Intelligence and Informatics, in line with its progressive educational philosophy, adopts a contemporary understanding of education and implements a student-centered teaching model that prioritizes interdisciplinary collaboration, advanced research, and innovation. The faculty provides students with theoretical and practical training in informatics-related areas and strengthens their ability to apply knowledge to real-world situations. Graduates of the faculty make qualified contributions to the professional world, research environments, and academia by enhancing their problem-solving, communication, and teamwork skills.

C) Physical and Academic Infrastructure

According to the Near East University campus, the Faculty of Artificial Intelligence and Informatics possesses modern infrastructure designed to support future-oriented education and research. The faculty building includes 18 classrooms, all equipped with projection systems, smart boards, and internet connectivity. The faculty includes five fully equipped computer laboratories and specialized labs focused on artificial intelligence, machine learning, data science, cybersecurity, and software development. Students are provided with opportunities for project-based and practical work. The faculty collaborates with units such as the Near East University International Artificial

Intelligence and IoT Research Center to strengthen its research activities. It also includes academic staff working areas, meeting rooms, recreation zones, and study spaces to enhance the learning experience.

D) Accreditation and Quality Policy

The Faculty of Artificial Intelligence and Informatics embraces national and international quality standards in its education and research processes and aims to continuously improve education quality through standardized academic approaches. The faculty participates in national and international academic processes, contributing to developing academic standards and lifelong learning activities. Its quality policy aims to provide students with a strong and well-rounded professional foundation.

1.2. Faculty Mission, Vision and Core Values

A) Mission

The Faculty of Artificial Intelligence and Informatics aims to achieve excellence and leadership by educating qualified engineers and researchers equipped with knowledge and skills at international standards. The faculty emphasizes interdisciplinary collaboration in artificial intelligence, informatics, and data science. Graduates are educated to respond to the evolving needs of the global workforce ethically and effectively.

B) Vision

Drawing strength from its natural connection with technology, the Faculty of Artificial Intelligence and Informatics envisions creating a unique environment that fosters collaboration, research, and innovation. The faculty aims not only to contribute to scientific projects but also to educate professionals who will lead and shape the technological future.

C) Core Values

1. Embracing a culture of quality
2. Supporting continuous improvement
3. Ensuring sustainable development
4. Commitment to scientific and universal standards
5. Adherence to ethical values
6. Respect for diversity
7. Encouraging innovative thinking

1.3. Faculty Aims and Objectives

A) Faculty Goals

1. To educate qualified engineers and researchers in the fields of artificial intelligence and informatics.
2. To contribute to scientific and technological development.
3. To conduct interdisciplinary studies and strengthen scientific collaborations.
4. To increase societal digital literacy.
5. To enhance students' analytical thinking and lifelong-learning skills.

B) Faculty Objectives

The goals comprise concrete and measurable steps established to achieve the objectives of the department. **When expressing the goals:**

● They should be written using the infinitive form (e.g., -ing form in English).
● They should be inclusive of the objective statements.
● Separate goals should be developed for each objective statement.
● Consistency with the objectives should be ensured.
● They should align with the learning outcomes of the program.
● The competencies that graduates will be equipped with should be clearly stated.

Below are examples of Objectives and Goals covering the Field of Education, the Field of Research, and Contributions to Society and Educational Services.

C) Objectives and Goals Covering the Field of Education

Objective 1: To improve the quality of education and train well-equipped graduates.

- Goal 1.1: To modernize and make learning environments accessible.
- Goal 1.2: To enhance students' level of academic knowledge.
- Goal 1.3: To develop programs that allow students to apply their knowledge in the field.

Objective 2: To train teachers equipped with 21st-century skills.

- Goal 2.1: To design learning environments supported by innovative teaching methods.
- Goal 2.2: To develop educational content that enhances digital literacy skills.
- Goal 2.3: To organize activities that foster critical thinking skills.

D) Objectives and Goals Covering the Field of Research

Objective 1: To produce high-quality knowledge with proven universal validity.

- Goal 1.1: To create learning environments that enhance students' scientific research skills.
- Goal 1.2: To provide opportunities that strengthen the research identities of academic staff.
- Goal 1.3: To support the participation of academic staff in national and international scientific events.
- Goal 1.4: To develop academic incentives that promote the creation of sustainable projects by academic staff.

E) Objectives and Goals Covering Contributions to Society and Educational Services

Objective 1: To train qualified teachers who contribute to the social and cultural development of individuals.

- Goal 1.1: To enable students' participation in social responsibility projects.
- Goal 1.2: To organize course content that fosters cultural awareness among students.
- Goal 1.3: To support students' social and cultural development through innovative teaching methods.
- Goal 1.4: To develop educational strategies that address the social and cultural needs of the community.

1.4. Faculty Organizational Chart

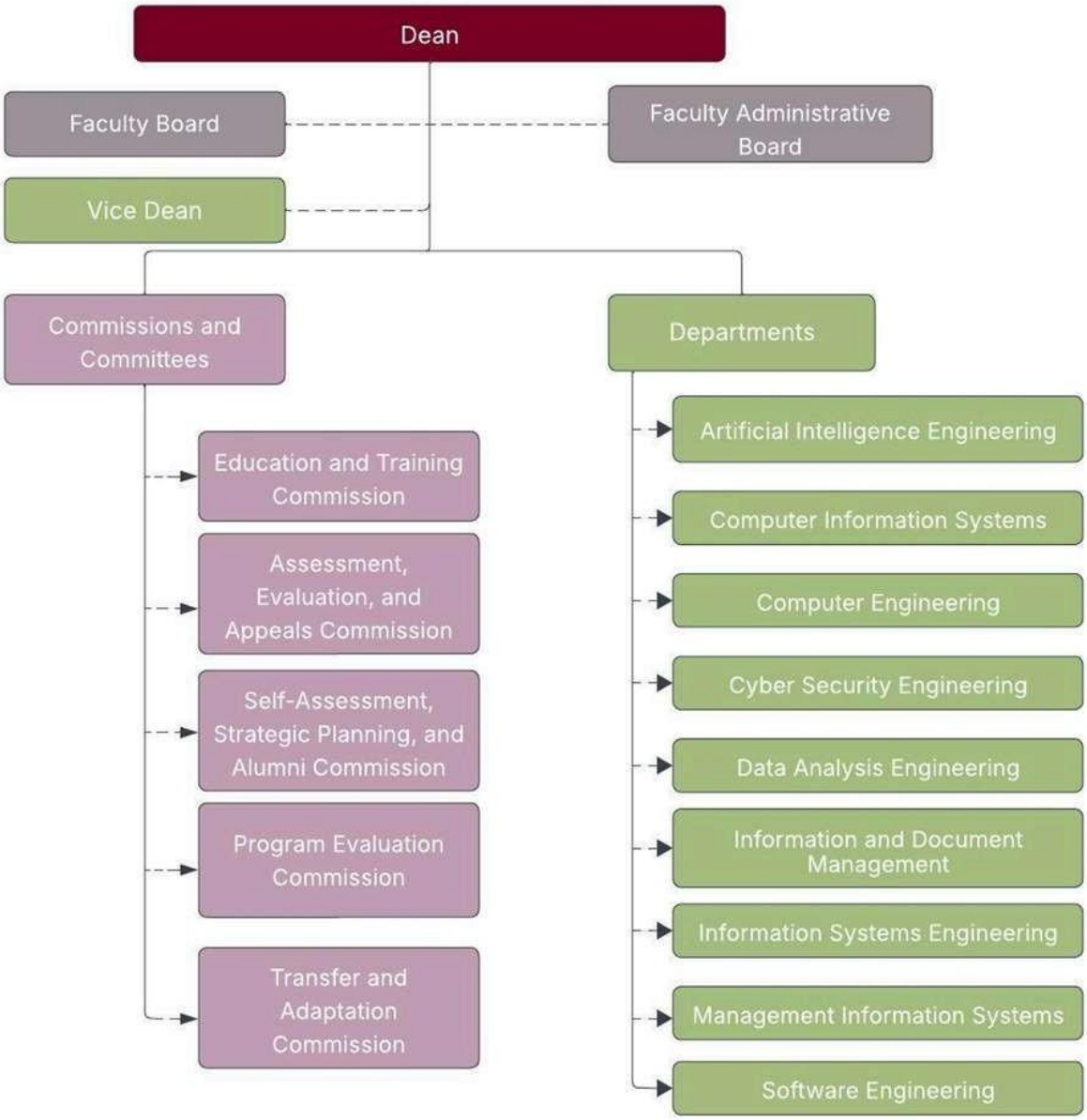


Figure 1. Organizational Chart

1.5. Faculty Administration

Academic Title and Full Name	Academic Unit of Appointment
Prof.Dr. Fadi Al-Turjman	Software Engineering
Prof.Dr. Nadire Çavuç	Computer Informatics Systems

Prof.Dr. FeziLe ÖzdamLi	Management Information Systems
Prof. Dr. GüLsüm Açiksoy	Artificial Intelligence Engineering
Prof.Dr. Rahib Abiyev	Computer Engineering
Assoc.Dr. ldoko John Bush	Cybersecurity Engineering
Assoc.Dr. Seren Baçaran	Data Analytics Engineering
Assist.Prof.Dr. Amr Abdelbari	Information Systems Engineering

1.6. Academic Staff of the Faculty

A) Academic Structure and Main Disciplines

- The Near East University Faculty of Artificial Intelligence and Informatics conducts innovative education and research activities in artificial intelligence , information technologies, and data science through its interdisciplinary structure.
- The faculty consists of nine academic departments: Information and Records Management, Information Systems Engineering, Cybersecurity Engineering, Software Engineering, Computer Informatics Systems, Data Analysis Engineering, Artificial Intelligence Engineering, Management Information Systems, and Computer Engineering. Each department offers both theoretical and practical courses in its field, thereby contributing effectively to undergraduate and postgraduate programs.
- Computer Engineering and Software Engineering provide fundamental engineering skilLs in software development, algorithms, and system design. Artificial Intelligence.
- Engineering and Data Analysis Engineering offer advanced training and research opportunities in Al techniques, machine Learning, and big data analytics. Cybersecurity Engineering focuses on network security, cryptography, and cyber defense. Information Systems Engineering and Management Information Systems emphasize the integration of information technologies into business and organizational structures. Computer Informatics Systems equips students with interdisciplinary IT infrastructure and solution development skills, while Information and Records Management contributes to society and

academia through expertise in information resource management and digital archiving.

- Through this comprehensive academic structure, the faculty delivers
- Technology-oriented, innovative, and research-based education, offering students a broad range of specializations and actively contributing to both regional and gLobaL scientific development.

B) Distribution of Academic Staff and Human Resources Capacity

No	Faculty /School/Institute	Department / Academic Unit	Academic Staff (with Title)
1	Faculty of Artificial Intelligence and Informatics	Software Engineering	Prof.Dr. Fadi Al-Turjman
2	Faculty of Artificial Intelligence and Informatics	Computer Informatics Systems	Prof.Dr. Nadire Çavuç
3	Faculty of Artificial Intelligence and Informatics	Management Information Systems	Prof.Dr. FeziLe Özdamü
4	Faculty of Artificial Intelligence and Informatics	Artificial Intelligence Engineering	Prof. Dr. Gülsüm Aşıksoy
5	Faculty of Artificial Intelligence and Informatics	Computer Engineering	Prof.Dr. Rahib Abiyev
6	Faculty of Artificial Intelligence and Informatics	Computer Engineering	Assoc. Dr. Ahmet İlhan

7	Faculty of Artificial Intelligence and Informatics	Computer Engineering	Assoc. Dr. Boran Şekeroğfu
8	Faculty of Artificial Intelligence and Informatics	Cybersecurity Engineering	Assoc. Dr. Idoko John Bush
9	Faculty of Artificial Intelligence and Informatics	Computer Informatics Systems	Assoc. Dr. Sahar Ebadinezhad
10	Faculty of Artificial Intelligence and Informatics	Data Analysis Engineering	Assoc. Dr. Seren Başaran
11	Faculty of Artificial Intelligence and Informatics	Information Systems Engineering	Assist.Prof.Dr. Amr Abdelbari
12	Faculty of Artificial Intelligence and Informatics	Computer Engineering	Assist.Prof.Dr. Elbrus Bashir lmanov
13	Faculty of Artificial Intelligence and Informatics	Artificial Intelligence Engineering	Assist.Prof.Dr. Kaan Uyar
14	Faculty of Artificial Intelligence and Informatics	Computer Informatics Systems	Assist.Prof.Dr. Nasim Ahmadzadeh
15	Faculty of Artificial Intelligence and Informatics	Computer Engineering	Assist.Prof.Dr. Ümit İlhan

16	Faculty of Artificial Intelligence and Informatics	Software Engineering	Assist.Prof.Dr. Oluwaseun Priscilla Olawale
17	Faculty of Artificial Intelligence and Informatics	Cybersecurity Engineering	Dr. Galip Savaş İlgi
18	Faculty of Artificial Intelligence and Informatics	Data Analysis Engineering	Dr. Hamit Altıparmak
19	Faculty of Artificial Intelligence and Informatics	Artificial Intelligence Engineering	Dr. Mohamad Ziad Altabel
20	Faculty of Artificial Intelligence and Informatics	Computer Informatics Systems	Dr. Oluwafemi Ayotunde Oke
21	Faculty of Artificial Intelligence and Informatics	Information and Records Management	Dr. Sıla Gürler
22	Faculty of Artificial Intelligence and Informatics	Software Engineering	Dr. Ramiz Salama
23	Faculty of Artificial Intelligence and Informatics	Information Systems Engineering	MSc. Çağrı Özkan
24	Faculty of Artificial Intelligence and Informatics	Information and Records Management	MSc. Rabiu Abubakar

25	Faculty of Artificial Intelligence and Informatics	Artificial Intelligence Engineering	MSc. Sinem Alturjman

C) Academic Development and Quality Policy

Within the Near East University Faculty of Artificial Intelligence and Informatics, there are nine academic departments: Information and Records Management, Information Systems Engineering, Cybersecurity Engineering, Software Engineering, Computer Informatics Systems, Data Analysis Engineering, Artificial Intelligence Engineering, Management Information Systems, and Computer Engineering.

The faculty stands out with its expert and experienced academic staff. As of the 2024—2025 academic year, the faculty employs a total of 25 academic personnel, comprising 5 professors, 5 associate professors, 6 assistant professors (doctoral faculty members), 6 PhD holders, and 3 lecturers.

The academic staff provide education at both undergraduate and graduate levels and contribute to scientific studies in artificial intelligence and information technologies through their research. They also participate in various training and development programs to support their professional growth and play active roles in national and international projects, thereby advancing their individual academic careers and increasing the faculty's recognition at the international level.

1.7. Academic Programs Offered by the Faculty

The Faculty of Artificial Intelligence and Informatics offers various undergraduate, master’s, and doctoral programs in order to deepen students’ knowledge in the fields of artificial intelligence and informatics, provide them with advanced competencies, and contribute to the development of the information technologies and artificial intelligence ecosystem. These programs enable students to gain interdisciplinary skills and provide opportunities for them to participate in innovative research and application processes.

The programs conducted within the Faculty are listed below.

Undergraduate Programs

- Information Systems Engineering
- Information and Records Management
- Computer Informatics Systems
- Computer Engineering
- Cyber Security Engineering
- Data Analytics Engineering
- Management Information Systems
- Artificial Intelligence Engineering
- Software Engineering

Master's Programs *(Thesis and Non-Thesis)*

- Information Systems Engineering
- Computer Informatics Systems
- Computer Engineering
- Artificial Intelligence Engineering
- Software Engineering

Doctoral Programs

- Computer Informatics Systems
- Computer Engineering

2. GENERAL INFORMATION ABOUT THE PROGRAM

2.1. Brief History and Development of the Program

The Department of Information Systems Engineering (ISE) was founded in 2009, aiming to provide an interdisciplinary foundation in computing, data management, and organizational information systems. Initially under the Faculty of Engineering, the program transitioned into the newly established Faculty of Artificial Intelligence and Informatics in 2025 to align with modern digital transformation trends and global academic developments. The department offers a Bachelor of Science (B.Sc.), fully taught in English, and complies with TYYÇ Level 6 and Bologna Process standards.

2.2. Type of Education Offered by the Program

Full-time, formal education. Within this scope, courses are conducted face-to-face, online, and through hybrid methods, combining both theoretical and practical components.

2.3. Level of Study

- The Department of Infotmation Systems Engineering offers a 4-year undergraduate program comprising 240 ECTS credits.
- The program meets the qualification requirements of Level 6 within the Turkish Higher Education Qualifications Framework (TYYÇ).
- In line with the European Qualifications Framework for Higher Education (QF-EHEA), it corresponds to the First Cycle (Bachelor's Level).
- The curriculum has been meticulously designed to fulfill both the ECTS credit requirements and the expected learning outcomes defined at this qualification level.

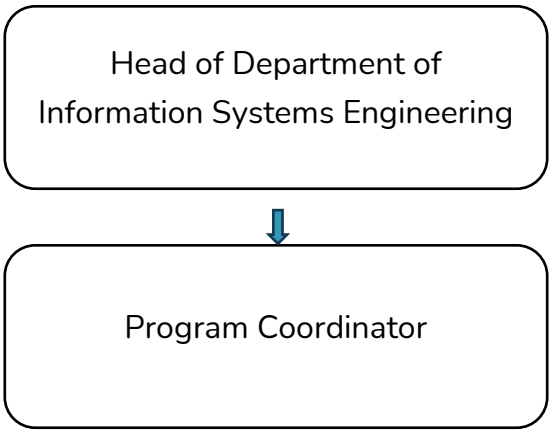
2.4. Language of Instruction

The language of instruction for the Department of Infotmation Systems Engineering is English.

2.5. Duration of the Program

The duration of the Department of Infotmation Systems Engineering program is 4 years (8 semesters). The department operates two semesters per academic year, Fall and Spring, comprising a total of 28 weeks.

2.6. Organizational Chart of the Program



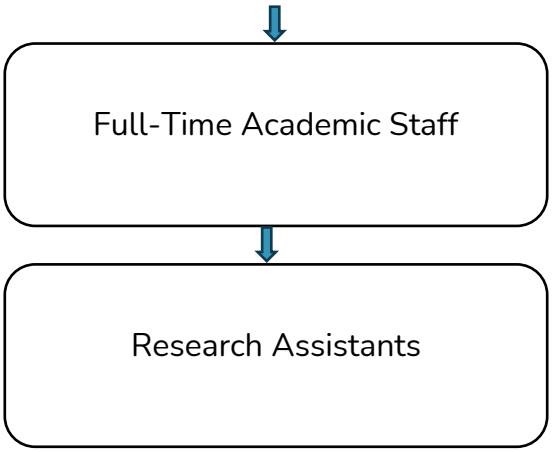


Figure 2. Organizational Chart of the Program

2.7. Program Coordinator

Assist. Prof. Dr. Amr Abdelbari

Head of Department of Information Systems Engineering

Amr.abdelbari@neu.edu.tr

2.8. Program Management and Academic Staff

The management team of the program, followed by information about the academic staff.

Assist. Prof. Dr. Amr Abdelbari

Head of Department of Information Systems Engineering

MSc. Çağrı Özkan

Coordinator of the Turkish program

3. PROGRAM MISSION AND VISION

This section should include the program's mission and vision.

3.1. Mission

To educate engineers capable of designing, implementing, managing, and integrating secure, innovative, and intelligent information systems that support organizational efficiency and digital transformation.

3.2. Vision

To be a leading international Information Systems Engineering program recognized for excellence in research, innovation, AI-integration, and industry collaboration.

4. PROGRAM'S CORE VALUES

- Innovation and creativity
- Ethical and professional responsibility
- Interdisciplinary collaboration
- Student-centered learning
- Academic excellence
- Technological leadership
- Global citizenship
- Lifelong learning

5. PROGRAM ACTIVITY AREAS

The activity areas of the Information Systems Engineering Program are addressed under four main headings: education and training, research and development, professional development and continuing education, and community contribution and service.

Education and Training Activities:
The Information Systems Engineering Program is structured to ensure that students acquire strong theoretical knowledge, practical skills, and professional competencies in line with current scientific developments and the evolving needs of the digital society. The program clearly defines the knowledge, skills, and competencies expected from its graduates in areas such as information systems design, software development, data management, networking, artificial intelligence applications, and system integration.

A comprehensive and up-to-date curriculum has been designed to support students' academic, professional, and personal development. The curriculum balances theoretical foundations with practical and applied learning through laboratory work, case studies, projects, internships, and senior design projects. Contemporary teaching and learning methods, including project-based learning, problem-solving approaches, teamwork, and technology-supported instruction, are widely used.

Assessment and evaluation processes are carried out systematically and transparently using midterm and final examinations, project evaluations, laboratory performance, assignments, and presentations. Academic advising and guidance services are provided throughout the program to support students' academic progress, career planning, and adaptation to university life.

Research and Development Activities:
Research and development activities constitute a core component of the Information Systems Engineering Program. Scientific research conducted by faculty members and students is actively encouraged and supported in areas such as artificial intelligence, data analytics, information systems management, cybersecurity, software engineering, and digital transformation.

Faculty members and senior students participate in national and international research projects, conferences, and scientific publications. Undergraduate students are encouraged to engage in research-oriented activities through project-based courses, graduation projects, and collaboration with research centers within the university.

These research and development activities contribute to the enhancement of students' analytical thinking, problem-solving, and scientific inquiry skills. At the same time, they strengthen the program's innovative and research-oriented structure and contribute to improving the quality and relevance of education in information systems engineering.

Professional Development and Continuing Education Activities:
The Information Systems Engineering Program places strong emphasis on professional development and lifelong learning. Activities aimed at continuously improving the professional knowledge, skills, and competencies of students and academic staff are an integral part of the program.

Within this scope, students are encouraged to participate in seminars, workshops, certification programs, technical training sessions, and academic events related to current and emerging technologies (such as cloud computing, artificial intelligence tools, cybersecurity practices, and software development frameworks). These activities help students stay up to date with rapid technological advancements and enhance their employability.

Academic staff are encouraged to engage in continuous professional development through research projects, scientific publications, international collaborations, and academic mobility programs. Mentorship, experience sharing, and interdisciplinary cooperation are supported to strengthen both teaching quality and research capacity.

Community Contribution and Service Activities:
Community contribution and service activities are an important dimension of the Information Systems Engineering Program. Both students and faculty members participate in activities that contribute to societal development through the effective and ethical use of information technologies.

Within this framework, the program supports social responsibility projects, technology-based community services, digital literacy activities, and voluntary initiatives that address societal needs such as education, accessibility, data security awareness, and digital transformation in public institutions. Internship programs and industry collaborations also enable students to contribute to real-world projects that have social and economic impact.

These activities help students develop a sense of social responsibility, professional ethics, and civic awareness, while enabling them to apply their technical knowledge to solve real-life problems and contribute positively to society.

6. PROGRAM PURPOSES AND OBJECTIVES

6.1. Program Purpose

Graduates of this program will be able to:

- Pursue successful careers as information systems engineers, analysts, and IT professionals.

- Integrate modern technologies such as AI, cloud computing, and data analytics into complex system designs.
- Lead organizational digital transformation initiatives.
- Conduct innovative research and contribute to scientific advancement.

6.2. Program Objectives

A) Purposes and Objectives Covering the Education Area

In this section, the main purposes of the Information Systems Engineering Program in the field of education are clearly and measurably defined. The purposes and objectives are directly related to the program curriculum and aligned with the program learning outcomes.

Purpose 1:

To educate information systems engineers equipped with contemporary engineering knowledge and 21st-century professional skills.

Objective 1.1: To provide students with a strong foundation in mathematics, computing, and engineering principles.

Objective 1.2: To develop students' problem-solving and analytical thinking skills for complex information systems.

Objective 1.3: To equip students with the ability to design, develop, and manage modern information systems.

Purpose 2:

To establish a continuously updated and practice-oriented education program that meets current technological and societal needs.

Objective 2.1: To design up-to-date course content aligned with developments in information systems and digital technologies.

Objective 2.2: To apply contemporary teaching and learning methods supported by laboratory work and project-based learning.

Objective 2.3: To design assessment and evaluation methods compatible with program learning outcomes.

B) Purposes and Objectives Covering the Research Area

In this section, the purposes and objectives related to research activities within the Information Systems Engineering Program are defined. These purposes aim to develop students' and academic staff's research competencies and contribute qualified scientific output to the field.

Purpose 1:

To develop graduates with scientific research awareness and research-oriented thinking skills.

Objective 1.1: To provide students with fundamental knowledge of research methods and data analysis techniques.

Objective 1.2: To encourage student participation in research-based projects and graduation studies.

Objective 1.3: To support academic writing, presentation, and reporting skills in scientific contexts.

Purpose 2:

To strengthen the research capacity of the program in information systems and related interdisciplizary fields.

Objective 2.1: To encourage academic staff to conduct national and international research projects.

Objective 2.2: To promote publication of scientific studies in peer-reviewed journals and conferences.

Objective 2.3: To foster collaboration with research centers and industry partners.

C) Objectives and Goals Covering Contribution to Society and Educational Services

Objective 1: To educate information systems engineers who contribute to social, economic, and technological development.

Goal 1.1: To promote student participation in social responsibility and community-based technology projects.

Goal 1.2: To develop course activities that raise awareness of ethical, legal, and social issues related to information technologies.

Goal 1.3: To equip students with the ability to apply information systems solutions to societal problems.

7. PROGRAM QUALIFICATIONS

7.1. Program Qualifications

Knowledge – Theoretical and Factual Learning Outcomes

PQ1. Possesses fundamental knowledge of mathematics, science, and engineering relevant to information systems engineering.

PQ2. Understands concepts, principles, and theories related to software systems, data management, networks, and information technologies.

PQ3. Identifies and explains problems related to information systems engineering and theiSkills – Cognitive and Practical Learning Outcomes

PQ4. Analyzes and solves complex information systems engineering problems using appropriate methods and models.

PQ5. Designs, develops, and implements information systems that meet specified requirements and constraints.

PQ6. Uses modern engineering tools, programming languages, and information technologies effectively.

PQ7. Collects, analyzes, and interprets data to support decision-making and system improvement.

Competencies – Autonomy and Responsibility Learning Outcomes

PQ8. Works independently and takes responsibility as a member or leader of multidisciplinary teams.

PQ9. Acts in accordance with professional ethics, legal regulations, and quality standards in engineering practices.

Competencies – Learning Competence Learning Outcomes.

PQ10. Recognizes the need for lifelong learning and continuously improves personal and professional competencies.

Competencies – Communication and Social Competence Learning Outcomes

PQ11. Communicates effectively in written and oral form in English and collaborates efficiently in professional environments.

Competencies – Field-Specific Competence Learning Outcomes

PQ12. Evaluates the societal, environmental, and economic impacts of information systems engineering solutions and applies them responsibly.

7.2. The Relationship Between Program Qualifications and the Turkish Higher Education Qualifications Framework

The Turkish Higher Education Qualifications Framework (TYYÇ) is a national framework designed to ensure quality assurance in higher education and to define qualifications in line with international standards. It is compatible with the European Qualifications Framework (EQF) and covers associate, bachelor's, master's, and doctoral levels.

The Information Systems Engineering Program is structured at the bachelor's degree level (Level 6). At this level, program qualifications are defined in terms of Knowledge, Skills, and Competence, as specified in TYYÇ Level 6 descriptors.

The program qualifications are aligned with TYYÇ Level 6 learning outcomes, ensuring that graduates possess comprehensive theoretical and practical knowledge, advanced problem-solving skills, and professional competencies required for information systems engineering practice.

A matrix demonstrating the relationship between the program qualifications and the TYYÇ Level 6 descriptors is prepared to show the level of contribution of each qualification.

Knowledge – Theoretical and Factual Learning Outcomes	PY1. Acquire sufficient background in mathematics, science, and computer engineering; apply theoretical and practical knowledge to analyze and solve information systems engineering problems.
	PY2. Identify, formulate, and analyze complex problems in information systems; select and apply appropriate models and methods.
Skills – Cognitive and Practical Learning Outcomes	PY3. Design complex systems, processes, or products to meet desired needs under realistic constraints such as cost, security, sustainability, and ethics; apply modern design methodologies.
	PY4. Develop, select, and use modern engineering tools, techniques, and IT technologies effectively for analysis, modeling, and implementation.
	PY5. Design and conduct experiments; collect, analyze, and interpret data to investigate complex information systems engineering problems.
Competencies – Autonomy and	PY6. Work effectively as an individual and as a member or leader in multidisciplinary teams.

Responsibility Learning Outcomes	PY7. Communicate effectively in Turkish and in at least one foreign language, both orally and in writing; prepare reports, design documents, and deliver effective presentations.
Competencies – Learning Competence Learning Outcomes	PY8. Recognize the need for lifelong learning; have the ability to access information, follow scientific and technological developments, and continuously adapt skills.
	PY9. Understand and commit to professional ethics, responsibilities, and standards in information systems engineering practices.
Competencies – Communication and Social Competence Learning Outcomes	PY10. Apply knowledge of project management, risk management, change management, entrepreneurship, and innovation; understand the fundamentals of sustainable development.
	PY11. Recognize the global, societal, legal, and environmental impacts of information systems solutions; be aware of health, safety, and contemporary issues.
Competencies – Field-Specific Learning Outcomes	PY12. Integrate knowledge of computer systems, software, data management, networks, and organizational processes to design and implement secure, efficient, and innovative information systems.

Program Outcome (ISE)	**Description**	**Mapped TYYÇ Outcome**
ISE Outcome 1	Acquire sufficient background in mathematics, science, and computer engineering; apply theoretical and practical knowledge	TYYÇ 6.1 – Demonstrates sufficient background in mathematics, science, and engineering relevant to the field

	to analyze and solve information systems engineering problems.	
ISE Outcome 2	Identify, formulate, and analyze complex problems in information systems; select and apply appropriate models and methods.	TYYÇ 6.2 – Identifies, formulates, and solves complex engineering problems
ISE Outcome 3	Design complex systems, processes, or products to meet desired needs under realistic constraints such as cost, security, sustainability, and ethics; apply modern design methodologies.	TYYÇ 6.3 – Designs systems, components, or processes under realistic constraints
ISE Outcome 4	Develop, select, and use modern engineering tools, techniques, and IT technologies effectively for analysis, modeling, and implementation.	TYYÇ 6.4 – Uses modern engineering tools and IT technologies effectively
ISE Outcome 5	Design and conduct experiments; collect, analyze, and interpret data to investigate complex information systems engineering problems.	TYYÇ 6.5 – Designs and conducts experiments, collects, analyzes, and interprets data
ISE Outcome 6	Work effectively as an individual and as a member or leader in multidisciplinary teams.	TYYÇ 6.6 – Works individually and in teams, takes responsibility in multidisciplinary projects
ISE Outcome 7	Communicate effectively in Turkish and in at least one foreign language, both orally and in writing; prepare reports, design documents, and deliver effective presentations.	TYYÇ 6.8 – Communicates effectively in Turkish and at least one foreign language, prepares reports, makes presentations
ISE Outc	Recognize the need for lifelong learning; have the ability to access information, follow scientific and	TYYÇ 6.7 – Recognizes the necessity of lifelong learning and self-development

ome 8	technological developments, and continuously adapt skills.	
ISE Outcome 9	Understand and commit to professional ethics, responsibilities, and standards in information systems engineering practices.	TYYÇ 6.9 – Acts in accordance with ethical principles, considers professional responsibilities
ISE Outcome 10	Apply knowledge of project management, risk management, change management, entrepreneurship, and innovation; understand the fundamentals of sustainable development.	TYYÇ 6.10 – Has knowledge of project management, business practices, entrepreneurship, and innovation
ISE Outcome 11	Recognize the global, societal, legal, and environmental impacts of information systems solutions; be aware of health, safety, and contemporary issues.	TYYÇ 6.11 – Evaluates the impact of engineering solutions on health, safety, environment, and society; is aware of legal consequences
ISE Outcome 12	Integrate knowledge of computer systems, software, data management, networks, and organizational processes to design and implement secure, efficient, and innovative information systems.	TYYÇ 6.12 – Gains specific competence in the field of engineering

7.3. The Relationship Between Courses and Program Qualifications

	Field-Specific Core Courses **General Common Courses** **General Culture Elective Courses** **Field-Specific Professional Knowledge Courses**	-	**PROGRAM QUALIFICATIONS (OUTCOMES)**

	COURSE CODE	COURSE NAME	AKTS	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12
1. Year / 1. Semester	CHM101	G.Chemistry	**5**												
	ENG101	English I	**3**												
	PHY101	G. Physics I	**5**												
	MTH101	Mathematics I	**5**												
	MTH113	Linear Algebra	**5**												
	AII102	Programming and Problem Solving	**5**	5	4	5	5	4	4	2	2	2	1	1	3
	CAM100	Campus Orientation	**2**												
1. Year / 2. Semester	AII108	Object-Oriented Programming	**6**	5	4	5	5	4	4	2	2	2	1	1	3
	ENG102	English II	**3**												
	MTH102	Mathematics II	**6**												
	AII104	Discrete Structures	**5**												
	PHY102	G. Physics II	**6**												
	CAR100	Career	**2**												
	GEC351	21st Century Skills	**2**	1	2	1	1	4	1	5	5	5	5	5	2
2. Year / 1. Semester	AII201	Data Structures and Algorithms	**6**	5	4	5	5	4	4	2	2	2	1	1	3
	AII001	Logic Design	**6**	5	4	5	5	4	4	2	2	2	1	1	5
	AII020	System Analysis and Design	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	AII427	Management for Engineers	**5**	1	1	1	1	5	1	5	4	5	5	5	3
	MTH251/MTH201	Probability and Statistics / Differential Equations	**6**												
	YIT101/TUR101	Turkish for Foreign Students I	**2**												
2. Year / 2. Semester	AII202	Database Management Systems	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	AII006	Web Design and Programming	**4**	5	4	5	5	4	4	2	2	2	1	1	5
	AII426	Economics for Engineers	**5**	1	1	1	1	4	1	4	5	5	5	4	2
	AII007	Multimedia Systems	**4**	5	4	5	5	4	4	2	2	2	1	1	5

	ISE206	Project Management	**4**	1	1	1	1	5	1	4	5	5	5	4	2
	YIT102/TUR102	Turkish for Foreign Students II / Turkish II	**2**												
	ISE299	Summer Traning I	**6**	5	4	5	5	4	4	2	2	2	5	1	5
3. Year / 1. Semester	AII302	Operating Systems	**6**	5	4	5	5	4	4	2	2	2	1	1	5
	AII004	Programming Languages I	**7**	5	4	5	5	4	4	2	2	2	1	1	5
	ENG201	Oral Communication Skills	**4**												
	AII311	Management Information Systems for Engineers	**7**	1	1	1	1	5	1	4	5	5	5	4	2
	AII439	Occupational Health and Safety I	**4**	1	1	1	1	4	1	4	5	5	5	4	2
	AIT103/AİT101	Principles of Atatürk and the History of Turkish Revolution I	**2**												
3. Year / 2. Semester	CS322	Web Application Development	**4**	5	4	5	5	4	4	2	2	2	1	1	5
	AII303	Data Communication and Networking	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	ISE301	Geographic Information Systems	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	AII003	Software Engineering	**6**	5	4	5	5	4	4	2	2	2	1	1	5
	CHC100	Cyprus: History and Culture	**2**	1	2	1	1	1	1	5	5	5	3	3	2
	AIT104/AİT102	Principles of Atatürk and the History of Turkish Revolution II	**2**												
	ISE399	Summer Traning II	**6**	5	4	5	5	4	4	2	2	2	5	1	5
4. Y	AII428	eGovernment	**5**	5	4	5	5	4	4	2	2	2	1	2	5

	AII430	Principles of Information Security	**6**	5	4	5	5	4	4	2	2	2	1	4	5
	ISE491	Graduation Project I	**4**	5	4	5	5	4	4	2	2	2	1	2	5
	AII452	Artificial Intelligence Applications	**3**	5	4	5	5	4	4	2	2	2	1	1	5
	AII010	Safety in Informatics	**2**	5	4	5	5	4	4	2	2	2	1	4	5
	TE	Technical Elective	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	TE	Technical Elective	**5**	5	4	5	5	4	4	2	2	2	1	1	5
4. Year / 2. Semester	AII429	Engineering Ethics	**6**	1	2	1	1	1	4	2	5	5	3	3	2
	ISE492	Graduation Project II	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	AII422	Software Testing	**4**	5	4	5	5	4	4	2	2	2	1	1	5
	TE	Technical Elective	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	TE	Technical Elective	**5**	5	4	5	5	4	4	2	2	2	1	1	5
	TE	Technical Elective	**5**	5	4	5	5	4	4	2	2	2	1	1	5

Toplam Ders: 53 Toplam AKTS: 240

8. COURSE LIST

8.1. Distribution Tables of Semester and Elective Courses in the Program

1st Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
CHM101	G.Chemistry	G. Kimya	C	3	2	4	5
ENG101	English I	İngilizce I	C	2	0	2	3
PHY101	G. Physics I	Genel Fizik I	C	3	2	4	5
MTH101	Mathematics I	Matematik I	C	4	0	4	5

2nd Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII108	Object-Oriented Programming	Nesne Yönümlü Programlama	C	2	2	3	6
ENG102	English II	İngilizce II	C	3	0	2	3
MTH102	Mathematics II	Matematik II	C	4	0	4	6
AII104	Discrete Structures	Ayrık Yapılar	C	3	0	3	5

MTH113	Linear Algebra	Doğrusal Cebir	C	3	0	3	5		PHY102	G. Physics II	Genel Fizik II	C	3	2	4	6
AII102	Programming and Problem Solving	Programlama ve Problem Çözme	C	3	2	4	5		CAR100	Career	Kariyer	C	2	0	0	2
CAM100	Campus Orientation	Kampüse Uyum	C	2	0	0	2		GEC351	21st Century Skills	21. Yüzyıl Becerileri	E	2	0	0	2
Total				20	6	21	30		Total				19	4	16	30

3rd Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII201	Data Structures and Algorithms	Veri Yapıları ve Algoritmalar	C	3	2	4	6
AII001	Logic Design	Sayısal Mantık	C	3	2	4	6
AII020	System Analysis and Design	Sistemi Analizi ve Tasarımı	C	3	0	3	5
AII427	Management for Engineers	Mühendisler için Yönetim	E	3	0	3	5
MTH251/MTH201	Probability and Statistics / Differential Equations	Olasılık ve İstatistik / Diferansiyel Denklemler	E	3	0	3	6
YIT101/TUR101	Turkish for Foreign Students I	Yabancılar için Türkçe I	C	2	0	2	2
Total				17	4	19	30

4th Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII202	Database Management Systems	Veritabanı Yönetim Sistemleri	C	4	0	4	5
AII006	Web Design and Programming	Web Tasarımı ve Programlama	C	2	2	3	4
AII426	Economics for Engineers	Mühendisler için Ekonomi	E	3	0	3	5
AII007	Multimedia Systems	Çokluortam Sistemleri	C	2	2	3	4
ISE206	Project Management	Proje Yönetimi	C	3	0	2	4
YIT102/TUR102	Turkish for Foreign Students II / Turkish II	Yabancılar için Türkçe II / Türk Dili II	C	2	0	2	2
ISE299	Summer Traning I	Staj I	C	0	0	0	6
Total				16	4	17	30

5th Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII302	Operating Systems	İşletim Sistemleri	C	3	0	3	6

6th Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
CS322	Web Application Development	Web Uygulama Geliştirme	E	2	2	3	4

AII004	Programming Languages I	Programlama Dilleri I	C	2	2	3	7		AII303	Data Communication and Networking	Veri İletişimi ve Bilgisayar Ağları	C	2	2	4	5
ENG 201	Oral Communication Skills	Sözlü İletişim Becerileri	C	3	0	3	4		ISE 301	Geographic Information Systems	Coğrafi Bilgi Sistemleri	C	3	2	4	5
AII311	Management Information Systems for Engineers	Mühendisler içinYönetim Bilişim Sistemleri	C	4	0	4	7		AII003	Software Engineering	Yazılım Mühendisliği	C	3	0	3	6
AII439	Occupational Health and Safety I	İş Sağlığı ve Güvenliği I	C	2	0	2	4		CHC100	Cyprus: History and Culture	Kıbrıs Kültürü ve Tarihi	E	2	0	0	2
AIT103/ AİT101	Principles of Atatürk and the History of Turkish Revolution I	Atatürk İlkeleri ve İnkılap Tarihi I	C	2	0	2	2		AIT 104 /AİT 102	Principles of Atatürk and the History of Turkish Revolution II	Atatürk İlkeleri ve İnkılap Tarihi II	C	2	0	2	2
									ISE 399	Summer Traning II	Staj II	C	0	0	0	6
Total				16	2	17	30		Total				14	6	16	30

7th Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII428	eGovernment	eDevlet	C	3	0	3	5
AII430	Principles of Information Security	Bilgi Güvenliği Prensipleri	E	3	0	3	6
ISE491	Graduation Project I	Bitirme Projesi I	C	0	6	3	4
AII452	Artificial Intelligence Applications	Yapay Zeka Uygulamaları	C	2	2	3	3
AII010	Safety in Informatics	Bilişimde Güvenlik	C	2	0	3	2
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5
Total				16	8	21	30

8th Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E
AII429	Engineering Ethics	Mühendislik Etiği	E	3	0	3	6
ISE 492	Graduation Project II	Bitirme Projesi II	C	0	6	3	5
AII422	Software Testing	Yazılım Sınanması	E	2	2	3	4
TE	Technical Elective	Teknik Seçmeli	E	2	2	3	5
TE	Technical Elective	Teknik Seçmeli	E	2	2	3	5
TE	Technical Elective	Teknik Seçmeli	E	2	2	3	5
Total				11	8	18	30

Total No. of Courses	53
Total No. Of Electives	14

Percentage of Electives	26.4 %
Total ECTS	240

Total No. Of Credits	145

P: Hours of Practice/Lab	C: Credits	E: ECTS

Key:

C/E:Compulsory/Elective	T: Hours of Theoretical Study

ELECTIVE COURSE

CODE	COURSE NAME	COURSE TURKISH NAME	T	P	C	E
AII431	e-Commerce	e-Ticaret	2	2	3	5
AII412	Database Applications	Veritabanı Uygulamaları	2	2	3	5
AII002	System Simulation	Sistem Simulasyonu	3	0	3	5
ISE412	Health Information Management	Sağlık Bilgi Yönetimi	3	0	3	5
ISE413	Strategic Information Systems Management	Stratejik Bilişim Sistemleri Yönetimi	3	0	3	5
ISE414	Information in Hospitality and Tourism	Konaklama ve Turizmde Bilişim	3	0	3	5
ISE415	Accounting Information Systems	Muhasebe Bilişim Sistemleri	3	0	3	5
ISE430	Human-Computer Interaction	İnsan-Bilgisayar Etkileşimi	3	0	3	5
AII404	Neural Networks	Yapay Sinir Ağları	2	2	3	5

AII419	Image Processing	Görüntü İşleme	2	2	3	5
AII005	Internet Programming	Internet Programlama	2	2	3	5
AII402	Computer Graphics	Bilgisayar Grafikleri	2	2	3	5
AII405	Computer Hardware	Bilgisayar Donanımı	3	0	3	5
AII406	System Programming	Sistem Programlama	2	2	3	5
AII413	Introduction to Artificial Intelligence	Yapay Zeka'ya Giriş	3	0	3	5
ISE428	Forensic Information Systems	Adli Bililşim Sistemleri	2	2	3	5
AII417	Mobile Programming	Mobil Programlama	2	2	3	5
AII408	Advanced Object Oriented Programming	Gelişmiş Nesne Yönümlü Programlama	2	2	3	5
AII409	Object Oriented Programming II	Nesne Yönümlü Programlama II	2	2	3	5
AII351	Embedded Systems	Gömülü Sistemler	2	2	3	5
AII407	Programming Languages II	Programlama Dilleri II	2	2	3	5
AII415	Decision Making	Karar Verme	3	0	3	5

AII461	Generative Ai	Üretken Yapay Zeka	2	2	3	5
		Teknik Olmayan Seçmeli				
CHC100	Cyprus History and Culture	Kıbrıs Kültürü ve Tarihi	2	0	0	2
CAR100	Career Planning	Kariyer Planlama	2	0	0	2
SEC351	21st Century Skills	21. Yüzyıl Becerileri	2	0	0	2

8.2. Common Compulsory Courses Offered University-Wide

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, ad joint and inverse matrices, Cramer's rule. Euclidean vector spaces: Euclidean n-space, linear transformation from R n to Rm. 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: AII108; Prerequisite: AII102; 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: AII104; 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 60 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.

2nd Year | 1st SEMESTER (FALL)

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.

2nd Year | 2nd SEMESTER (SPRING)

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. Many and banking. Price changes and inflation. Business and company f inance.

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 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

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: --

3rd Year | 1st SEMESTER (FALL)

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.

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.

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 andWest, 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.

AİT104/AİT102

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

AII005 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.

AII413 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.

AII408 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.

AII409 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 practice cal experience by designing and writing Java applications. Components of Java projects. Designing Graphic User Interface GUI. Java Internet applications. Java applets.

AII417 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.

AII407 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 f ile 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.

AII431 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.

AII412 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:

AII426 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. Many and banking. Price changes and inflation. Business and company f inance.

AII006 - 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.

AII402 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.

AII405 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.

AII351 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.

AII419 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.

AII415 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.

AII461 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.

AİT104/AİT102

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 60 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.

8.3. Course Syllabus

The courses' syllabuses are in appendix 1.

9. PRINCIPLES OF PROGRAM ASSESSMENT AND EVALUATION

Course performance at Near East University (NEU) is generally based on face-to-face examinations (midterm and final). In addition, to encourage active participation and assess diverse skills, some courses may employ alternative assessment methods such as project assignments, presentations, homework, quizzes, and group work. The assessment method and criteria for each course may vary depending on the course characteristics and the instructor's preferences. These criteria are announced at the beginning of the semester and are clearly stated in the course syllabus. Students final course grades are calculated as the weighted average of examinations, assignments,

and any other assessment tools implemented throughout the semester. Accordingly, students are expected to participate actively in all assessment components, not only in exams.

9.1. Exam Rules

- Midterm and final exams are conducted face-to-face.
- Instructors may additionally use projects, presentations, homework, quizzes, and group work as part of the assessment scheme.
- Assessment criteria and weightings are communicated to students at the start of the semester in the course syllabus.
- The final grade reflects the weighted average of all assessment components applied in the course.

9.2. Letter Grade Conversion Table

GRADE	LETTER GRADE	MULTİPLİER	AKTS GRADE
90-100	AA	4.0	A
85-89	BA	3.5	B*
80-84	BB	3.0	B*
75-79	CB	2.5	C*
70-74	CC	2.0	C*
60-69	DC	1.5	D
50-59	DD	1.0	E
49-00	FF	0.0	F

Passing thresholds by program level.

To be considered successful in a course: minimum DD for level 5 (associate) and level 6 (undergraduate) programs; minimum CC for level 7 (master's) programs; minimum

BB for level 8 (doctoral) programs. For courses not included in the GPA, students must receive S (Satisfactory).

Additional transcript notations (non-GPA where applicable).

I	Incomplete
S	Satisfactory Completion
U	Unsatisfactory
P	Successful Progress
NP	Not Successful Progress
EX	Exempt
NI	Not included
W	Withdrawal
NA	Never Attended

- **I (Incomplete):** Granted when course requirements are not completed by the grade due date for a valid reason accepted by the instructor. All outstanding work must be completed within one week after the grade due date. In exceptional cases, this may be extended to two weeks before the next semester begins by decision of the relevant academic unit administrator and the board. Otherwise, **I** convert to FF or U.
- **S (Satisfactory Completion):** Assigned for successful completion in non-credit / non-GPA contexts.
- **U (Unsatisfactory):** Assigned for failure in non-credit courses.

- **P (Successful Progress):** For multi-semester requirements not included in GPA when expected progress is achieved.
- **NP (Not Successful Progress):** For multi-semester requirements not included in GPA when expected progress is not achieved.
- **EX (Exempt):** Course exemption granted.
- **NI (Not Included):** Grade recorded but not included in GPA (and not counted within the registered program's taken courses).
- **W (Withdrawal):** With advisor recommendation and instructor approval, permitted after add/drop and within 10 weeks of semester start. Not allowed in the first two semesters. A student who previously received W in a course that is not included in GPA cannot withdraw from the same course again. Maximum withdrawals: 2 (associate), 4 (undergraduate). Withdrawn courses must be retaken when next offered.
- **NA (Never Attended):** Assigned to students who fail attendance requirements and lose the right to end-of-term assessments. **Not included in GPA**

Note: Student transcripts display letter grades corresponding to both national and ECTS credits

10. STUDENT ADMISSION AND REGISTRATION REQUIREMENTS

Admission to the Information Systems Engineering Undergraduate Program (Turkish and English Tracks) is carried out in accordance with the regulations and principles determined by the Council of Higher Education (YÖK), the Higher Education Planning, Evaluation, Accreditation and Coordination Council (YÖDAK), and Near East University Senate decisions.

Turkish citizens are admitted through the Student Selection and Placement System (ÖSYM) based on the results of the nationwide university entrance examination. International students are admitted according to the admission criteria determined by Near East University, which include evaluation of secondary education diplomas, international examination results, or equivalent qualifications recognized by the university.

Students who do not meet the required level of proficiency in the language of instruction are required to attend and successfully complete the Preparatory School program before commencing their undergraduate studies. All admitted students must complete the official enrollment procedures within the announced registration period. In the Turkish Track, the language of instruction is entirely Turkish. In the English Track, the language of instruction is entirely English. Applicants to the English Track have their English proficiency assessed through the compulsory preparatory program, which may last up to two years. For both tracks, candidates must make their preferences based on the Higher Education Institutions Examination (YKS) results and be placed by the Student Selection and Placement Center (ÖSYM). Registration procedures are carried out by the Directorate of Student Affairs, located on the 1st floor of the Faculty of Pharmacy building, open Monday–Friday, 08:00–17:00. Students may obtain information about faculties, complete registration, and request official documents such as exam entry slips, student certificates, and transcripts from this unit. Submission of all required documents and payment of the relevant fees are mandatory; registration is completed only when these conditions are fully met. At the beginning of each academic term, re-registration must be completed. Students who do not renew their registration lose the right to attend classes and take examinations for that term. International students may be admitted without an exam or through a special examination under procedures determined by the University. This process is carried out in accordance with the relevant legislation and Senate decisions. Individuals with special (non-degree) student status may take only certain courses; they are not considered enrolled in the program and are not eligible for a diploma.

Students who successfully complete the program and fulfill all requirements are awarded a bachelor's degree. Grade records are securely stored digitally; when needed, certified copies of these records may be provided to the student or to competent authorities. For students who withdraw their registration, fees previously paid are non-refundable. Leaves of absence granted for health, military service, financial reasons, or educational purposes are not counted toward the official period of study; such cases are evaluated and decided by the relevant boards. Up on registration, each student is assigned an academic advisor. Students are expected to maintain regular contact with their advisor and obtain approval for course selection, internship, and graduation matters. All processes—such as compulsory internship,

disciplinary procedures, scholarship opportunities, and health services—are conducted within the framework of Near East University's current regulations, directives, and Senate decisions.

11 Horizontal and Vertical Transfer Opportunities

11.1. Horizontal Transfer Opportunities

Students enrolled in the Information Systems Engineering program may apply for horizontal transfer in accordance with the "Regulation on Horizontal Transfers Between Higher Education Institutions" issued by YÖK and the relevant university regulations. Horizontal transfers may take place either within Near East University or from other higher education institutions, subject to quota availability, academic performance, course equivalency, and institutional approval. Applications are evaluated based on students' cumulative grade point averages, completed coursework, and compatibility of curricula.

Applicants for horizontal transfer must not have received any disciplinary sanction, must hold a cumulative GPA of at least 2.00/4.00 (or 60/100), and must have successfully completed enough courses whose contents are compatible with the curriculum of the target program. For transfers based on central placement scores, the applicant must meet the base score (taban puan) of the target program for the year of application. Applications must be submitted within the dates announced by the University, and all required documents must be delivered in full to the relevant academic unit; evaluations are made within available quotas and according to applicants' academic standing. For accepted students, course exemptions and class placement/adaptation are determined by decision of the relevant Faculty Administrative Board, in line with the Department Chair's opinion. During evaluation, particular attention is paid to the compatibility of course contents, especially in computer science fundamentals, software development, and software engineering courses; course equivalency is established on the basis of content alignment between courses previously taken and those in the target program. Applications arising from special circumstances (e.g., war, natural disaster, health issues) are evaluated separately in accordance with the relevant legislation, and additional documentation may be requested. For citizens of the Republic of Türkiye, further details on NEU transfer rules are available in the Council of Higher Education (YÖK) Horizontal

Transfer Rules and in the Near East University Regulation on Horizontal Transfer and Credit Transfer (29.05.2023).

11.2. VERTICAL TRANSFER OPPORTUNITIES

Graduates of associate degree programs may apply for vertical transfer to the Information Systems Engineering Undergraduate Program through the Vertical Transfer Examination (DGS) conducted by ÖSYM. Admission is subject to success in the examination and compliance with the program's academic requirements. For accepted students, course exemptions and class placement are determined by the relevant Faculty Administrative Board in line with the Department Chair's opinion.

12. RECOGNITION AND CREDIT TRANSFER OF PREVIOUS LEARNING

The Information Systems Engineering program recognizes prior formal, non-formal, and informal learning experiences in accordance with YÖK regulations and Near East University's Recognition of Prior Learning policy.

Courses previously completed at accredited higher education institutions may be exempted following an evaluation of course content, learning outcomes, credit equivalency, and academic workload. Exemption requests are assessed by the Departmental Board and finalized by the Faculty Board. Recognized courses are recorded in the student's academic transcript with a letter grade and are included in the CGPA; no exemption is granted for courses in which the student was not successful. For common compulsory courses such as Atatürk's Principles and History of the Turkish Revolution, Turkish Language, and Foreign Language, exemption may be granted without requiring credit matching. The exemption exam for these courses may be taken only once. If the total ECTS of the exempted courses exceeds 70% of the total ECTS for the semester in which the student is registered, the student is placed in the next class level. However, students who are placed in an upper class as a result of this process may not take upper-class courses in the first academic year following such placement. Objections to exemption and placement decisions may be lodged within two weeks from the date the results are notified to the student. In cases of horizontal or vertical transfer, course exemption requests are evaluated by the relevant Faculty (or School) Administrative Board in line with the opinion of the departmental committee. For exemption from the foreign language preparatory class, the student

must meet a specified language proficiency level demonstrated by exam results accepted by the University.

13. INTERNATIONAL PROGRAMS AND EXCHANGE OPPORTUNITIES

The Information Systems Engineering program actively supports student and academic staff mobility through international exchange programs such as Erasmus+, bilateral agreements, and institutional partnerships.

Students who meet the academic and language proficiency requirements may study abroad for one or two semesters at partner universities. Courses completed during the exchange period are recognized through ECTS-based credit transfer. These opportunities enhance students' global competencies, cultural awareness, and international professional networks.

In addition, NEU conducts exchange activities through various international student unions in different fields, including IFMSA (Medicine), IADS (Dentistry), IPSF (Pharmacy), and IVSA (Veterinary Medicine), under which research and clinical traineeship exchanges are available. During the summer, in collaboration with these unions, NEU organizes hands-on training activities, joint research projects, and cultural events with students from different countries. Thanks to NEU's active collaborations with 114 universities in 44 countries, students can both study and undertake internships abroad while also studying on the Turkish Republic of Northern Cyprus (TRNC) campus in a culturally diverse environment. NEU maintains reciprocal cooperation with many higher education institutions across Europe, Asia, the Americas, and Africa. Students may study for a half term or a full term, complete internships, or take part in international research projects at these universities. To provide students with global experience, NEU supports exchange not only through Erasmus+ but also via the Mevlana and Farabi programmes; in particular, the Mevlana Programme offers reciprocal exchange with universities in Türkiye, while the Farabi Programme supports student exchange with domestic institutions. Through these programmes, students can enhance their academic knowledge while experiencing different cultures and broadening their cultural horizons. Throughout the entire process—from application onward—the NEU International Office provides comprehensive support, including

advising services, documentation and application procedures, accommodation, and visa matters; students are informed and guided at every stage by specialist staff.

14. ACCREDITATION AND QUALITY ASSURANCE OF THE PROGRAM

In line with the university's quality policy, programs should be structured within the framework of a sustainable improvement approach to enhance the quality of educational activities; internal and external evaluation processes integrated into the quality assurance system should be comprehensively implemented. In this context, the program's quality policy, accreditation process, quality of education, research and development activities, and continuous improvement process should be addressed in this section.

This section should be prepared by taking into account the following subheadings:

14.1. Quality Policy

The Information Systems Engineering program adopts a quality-oriented approach aligned with national and international standards. The program continuously monitors and improves its educational, research, and administrative processes within the framework of YÖKAK, YÖDAK, Bologna Process, and institutional quality assurance policies.

14.2. Accreditation Process of the Program

The program is structured to comply with accreditation criteria of relevant national and international bodies. Periodic self-evaluation reports, stakeholder feedback, curriculum reviews, and performance indicators are used to ensure academic excellence and sustainability.

14.3. Quality of Education

Educational quality is ensured through outcome-based curriculum design, continuous assessment, student feedback mechanisms, external stakeholder involvement, and alignment with industry needs. Modern teaching methodologies, laboratory-supported learning, and project-based education are integral components of the program.

14.4. Research and Development Activities

Academic staff and students are encouraged to participate in research projects, scientific publications, conferences, and interdisciplinary collaborations. Research outcomes contribute directly to curriculum enrichment and technological innovation in the field of information systems.

14.5. Continuous Improvement Process

The program follows a continuous improvement cycle based on planning, implementation, evaluation, and feedback. Student satisfaction surveys, graduate tracking, employer feedback, and advisory board recommendations are systematically analyzed to update program objectives and learning outcomes.

15. GRADUATION REQUIREMENTS AND AWARDED DEGREE

15.1. Graduation Requirements

To graduate from the Information Systems Engineering Undergraduate Program, students must successfully complete all required and elective courses totaling **240 ECTS**, achieve a minimum **Cumulative Grade Point Average (CGPA) of 2.00/4.00**, and fulfill internship and graduation project requirements. Upon fulfillment of all academic and administrative requirements, the student becomes eligible for the Information Systems Engineering Bachelor's Diploma.

15.2. Awarded Degree

Graduates are awarded the degree of **Bachelor of Science (B.Sc.) in Information Systems Engineering**.

16. DIPLOMA SUPPLEMENT

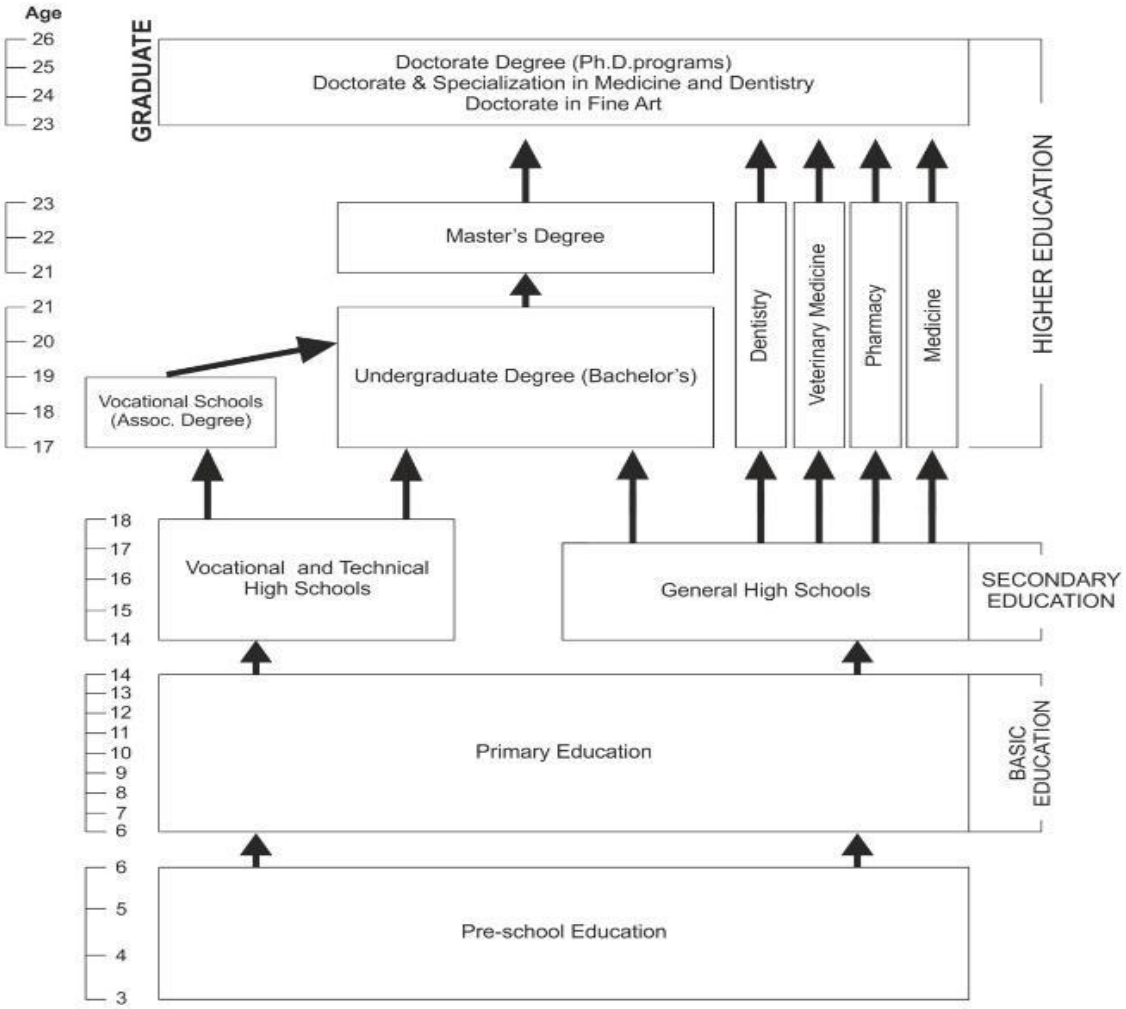
Graduates receive a Diploma Supplement issued in English, free of charge, in accordance with European Commission, Council of Europe, and UNESCO standards. The Diploma Supplement provides detailed information about the program, learning outcomes, qualification level, and grading system, facilitating international recognition.

DIPLOMA SUPPLEMENT

Diploma No: Diploma Date:

Near East Boulevard, Nicosia – North Cyprus+90 392 680 2000

GENERAL STRUCTURE OF THE NORTH CYPRUS EDUCATION SYSTEM



This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content, and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1. Family name(s):	**1.3. Place and date of birth:**
1.2. Given name(s) :	**1.4. Student identification number:**

2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1. Name of the qualification and (if applicable) the title conferred.	**2.4. Name and type of institution administering studies.**
2.2. Main field(s) of study for qualification	**2.5. Language(s) of instruction/examinations**
2.3. Name and status of awarding institution	

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1. Level of qualification First Cycle	**3.2. Official length of program** Normally 5 Years (excluding 1 year English Preparatory School, if necessary), 2 semesters per year, 14 weeks per semester. 8 SEMESTERS, 240 ECTS (European Credit Transfer System). Each course is credited with a number of ECTS (>=2) according to the student's workload (contact hours, laboratory work, examination, self-study, presentation etc.) and accumulation of credits (ECTS) is accomplished after successful completion of the course.

3.3. Access requirement(s)

High school diploma

Placement through a centralized national university placement examination

NEU Private Examination

4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1. Program requirements The Bachelor of Science degree is awarded to students who have successfully completed all courses in the curriculum, including. 40 working days of summer practice and have obtained cumulative grade point average (CGPA) value at least 2.00 on a 4.00 scale and	**4.2 Learning Outcome of the program** Upon completion of BSc. In Information Systems Engineering, students will demonstrate the ability to: 1-Acquire sufficient background in mathematics, science, and computer engineering; apply theoretical and

have no failing grades. The objectives are to provide the fundamentals of contemporary Information Systems Engineering education and to supply an overall and comprehensive outlook on the Information Systems Engineering profession. It is also aimed to provide the graduates with the abilities to adapt to the technological improvements in the field, with the verbal and written communication skills and with the knowledge on ethical issues of the profession.	practical knowledge to analyze and solve information systems engineering problems. 2-Identify, formulate, and analyze complex problems in information systems; select and apply appropriate models and methods. 3-Design complex systems, processes, or products to meet desired needs under realistic constraints such as cost, security, sustainability, and ethics; apply modern design methodologies. 4-Develop, select, and use modern engineering tools, techniques, and IT technologies effectively for analysis, modeling, and implementation. 5-Design and conduct experiments; collect, analyze, and interpret data to investigate complex information systems engineering problems. 6-Work effectively as an individual and as a member or leader in multidisciplinary teams. 7-Communicate effectively in Turkish and in at least one foreign language, both orally and in writing; prepare reports, design documents, and deliver effective presentations. 8-Recognize the need for lifelong learning; have the ability to access information, follow scientific and technological developments, and continuously adapt skills. 9-Understand and commit to professional ethics, responsibilities, and standards in information systems engineering practices. 10-Apply knowledge of project management, risk management, change management, entrepreneurship, and innovation; understand the fundamentals of sustainable development. 11-Recognize the global, societal, legal, and environmental impacts of information systems solutions; be aware of health, safety, and contemporary issues. 12-Integrate knowledge of computer systems, software, data management, networks, and organizational processes to design and implement secure, efficient, and innovative information systems.
4.3. Program details and the individual grades/marks/ECTS obtained. Please see the next page	**4.4 Mode of Study** Full-Time

4.4. Grading scheme, grade translation and grade distribution guidance:

For each course taken, the student is assigned one of the following grades by the course teacher.

For a BSc in Information Systems Engineering degree, students must obtain at least DD or S from each course and have a CGPA of not less than 2.00 out of 4.00 and have completed all the courses and summer practices in the program. The total credit points for a course are obtained by multiplying the coefficient of the final grade by the credit hours. In order to obtain the GPA for any given semester, the total credit points are divided by the total credit hours. Students who obtain a CGPA of 3.00-3.49 at the end of a semester are considered as "Honor Students" and those who obtain a CGPA of 3.50-4.00 at the end of a semester are considered as "High Honor Students" and this is recorded in their academic report. The letter grades, the quality point equivalents are:

Percentage Course	Coefficient	Grade	Percentage Course	Coefficient	Grade
90-100	4	AA	70-74	2	CC
85-89	3.5	BA	65-69	1.5	DC
80-84	3	BB	60-64	1	DD
75-79	2.5	CB	59 and below	0	FF

I- Incomplete **S-** Satisfactory Completion, **U**-Unsatisfactory, **NA**-Not Attended, **E**-Exempted, **W**– Withdrawn

ECTS grade distribution and grade descriptors:

NEU Grade	ECTS Grade	Percentage of successful students normally achieving the grade	Definition
AA	A	Best 5%	Excellent - outstanding performance with only minor errors
BA	B	Next 5 %	Very Good - above the average standard but with some errors
BB	B	Next 10 %	Very Good - above the average standard but with some errors
CB	C	Next 15 %	Good - generally sound work with a number of erros.
CC	C	Next 25 %	Good - generally sound work with a number of errors.
DC	D	Next 25 %	Satisfactory - fair but with significant shortcomings.
DD	E	Next 15 %	Sufficient - performance meets the minimum criteria.
FD	FX		Fail - some more work required before the credit can be awarded.
FF	F		Fail - considerable work is required.

4.5 Overall Classification of the Qualification: CGPA: ... /4.00 **Final Grade of the Degree: ...**

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1. Access to further study	5.2. Professional status conferred.
May apply to second cycle programs.	This degree enables the holder to exercise the profession.
6. ADDITIONAL INFORMATION	
6.1. Additional information To be eligible for a BSc. (Bachelor of Science) degree at Near East University Faculty of Artificial Intelligence and Informatics, all summer practices should be successfully completed. These practices are: ISE299 Summer Training I (ECTS = 6) ISE399 Summer Training II (ECTS = 6)	**6.2. Further Information Sources** **Department web site:** **https://aif.neu.edu.tr/** **University web site:** **https://neu.edu.tr/** **The Council of Higher Education of Turkey** **http://www.yok.gov.tr** **Higher Education Planning, Evaluation Accreditation and Coordination of North Cyprus Council Web site** **https://yodak.gov.ct.tr/**

4.3. Program details and the individual grade/marks obtained:

(1st Semester)

Course Code	Course Name	CR	ECTS	Status	Grade
CHM 101	General Chemistry	4	5	Compulsory	
AII102	Programming And Problem Solving	4	5	Compulsory	
ENG 101	English I	2	3	Compulsory	
MTH 101	Calculus I	4	5	Compulsory	
MTH 113	Linear Algebra	3	5	Compulsory	
PHY 101	General Physics I	4	5	Compulsory	
CAM100	Campus Orientation	0	2	Compulsory	
		21	30		

(2nd Semester)

Course Code	Course Name	CR	ECTS	Status	Grade
AII108	Object Oriented Programming	3	6	Compulsory	
ENG102	English II	2	3	Compulsory	
MTH102	Calculus II	4	6	Compulsory	
AII104	Discrete Structures	3	5	Compulsory	
PHY102	Physics II	4	6	Compulsory	
CAR100	Career Planning	0	2	Compulsory	
GEC351	21st Century Skills	0	2	Elective	
		16	30		

(3rd Semester)

Course Code	Course Name	CR	ECTS	Status	Grade
AII201	Data Structures And Algorithms	4	6	Compulsory	
AII001	Logic Design	4	6	Compulsory	

(4th Semester)

Course Code	Course Name	CR	ECTS	Status	Grade
AII202	Database Management Systems	4	5	Compulsory	
AII006	Web Design and Programming	3	4	Compulsory	

AII020	System Analysis and Design	3	5	Compulsory			AII426	Economics for Engineers	3	5	Elective	
AII427	Management for Engineers	3	5	Elective			AII007	Multimedia Systems	3	4	Compulsory	
MTH251/MTH201	Probability and Statistics / Differential Equations	3	6	Elective			ISE206	Project Management	2	4	Compulsory	
YIT101/TUR101	Turkish for Foreign Students I	2	2	Compulsory			YIT102/TUR102	Turkish for Foreign Students II / Turkish II	2	2	Elective	
							ISE299	Summer Traning I	0	6	Compulsory	
		19	30						17	30		

(5th Semester) (6th Semester)

Course Code	Course Name	CR	ECTS	Status	Grade		Course Code	Course Name	CR	ECTS	Status	Grade
AII302	Operating Systems	3	6	Compulsory			CS322	Web Application Development	3	4	Elective	
AII004	Programming Languages I	3	7	Compulsory			AII303	Data Communication and Networking	4	5	Compulsory	
ENG201	Oral Communication Skills	3	4	Compulsory			ISE301	Geographic Information Systems	4	5	Compulsory	
AII311	Management Information Systems for Engineers	4	7	Compulsory			AII003	Software Engineering	3	6	Elective	
AII439	Occupational Health and Safety I	2	4	Compulsory			CHC100	Cyprus: History and Culture	0	2	Elective	
AIT103/AİT101	Principles of Atatürk and the History of Turkish Revolution I	2	2	Compulsory			AIT104/AİT102	Principles of Atatürk and the History of Turkish Revolution II	2	2	Compulsory	
							ISE399	Summer Traning II	0	6	Compulsory	
		17	30						16	30		

(7th Semester) (8th Semester)

Course Code	Course Name	CR	ECTS	Status	Grade		Course Code	Course Name	CR	ECTS	Status	Grade
AII428	eGovernment	3	5	Compulsory			AII429	Engineering Ethics	3	6	Elective	
AII430	Principles of Information Security	3	6	Elective			ISE492	Graduation Project II	3	5	Compulsory	
ISE491	Graduation Project I	3	4	Compulsory			AII422	Software Testing	3	4	Elective	
AII452	Artificial Intelligence Applications	3	3	Compulsory			TE	Technical Elective	3	5	Elective	
AII010	Safety in Informatics	3	2	Compulsory			TE	Technical Elective	3	5	Elective	
TE	Technical Elective	3	5	Elective			TE	Technical Elective	3	5	Elective	
TE	Technical Elective	3	5	Elective								
		21	30						18	30		

7. CERTIFICATION OF THE SUPPLEMENT

7.1. Date :

7.2. Name and Signature :

7.3. Capacity : Registrar

7.4. Official stamp or seal :

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

The basic structure of the North Cyprus Education System consists of four main stages: pre-school education, primary education, secondary education and higher education.

Pre-school education consists of non-compulsory programs whereas primary education is a compulsory 8 year program for all children beginning from the age of 6. The secondary education system includes “General High Schools” and “Vocational and Technical High Schools”.

The Higher Education System in North Cyprus is regulated by the Higher Education Planning, Evaluation, Accreditation and Coordination Council (Yüksek öğretim Planlama, Denetleme, Akreditasyon ve Koordinasyon Kurulu – YÖDAK). Established in 1988, the Council regulates the activities of higher education institutions with respect to research, governing, planning and organization. The higher education institutions are established within the framework of the Higher Education Law. All programs of higher education should be accredited by YÖDAK.

Higher education in North Cyprus comprises all post-secondary higher education programs, consisting of short, first, second, and third cycle degrees in terms of terminology of the Bologna Process. The structure of North Cyprus higher education degrees is based on a two-tier system, except for dentistry, pharmacy, medicine and veterinary medicine programs which have a one-tier system. The duration of these one-tier programs is five years except for medicine which lasts six years. The qualifications in these one-tier programs are equivalent to the first cycle (bachelor’s degree) plus secondary cycle (master’s degree) degree. Undergraduate level of study consists of short cycle (associate degree) - (önlisans derecesi) and first cycle (bachelor’s degree) - (lisans derecesi) degrees which are awarded after the successful completion of full-time two-year and four-year study programs, respectively.

The graduate level of study consists of the second cycle (master’s degree) – (yüksek lisans derecesi) and third cycle (doctorate) – (doktora derecesi) degree programs. The

second cycle is divided into two sub-types named master without thesis and master with thesis. Master programs without thesis consist of courses and semester projects. The master programs with a thesis consist of courses, a seminar, and a thesis. Third cycle (doctorate) degree programs consist of completion of courses, passing a qualifying examination and a doctoral thesis. Specializations in dentistry, accepted as equivalent to third cycle programs are carried out within the faculties of dentistry. Specialization in medicine, accepted as equivalent to third cycle programs are carried out within the faculties of medicine, and university hospitals and training hospitals operated by the Ministry of Health.

Universities consist of graduate schools (institutes) offering second cycle (master's degree) and third cycle (doctorate) degree programs, faculties offering first cycle (bachelor's degree) programs, four-year higher schools offering first cycle (bachelor's degree) degree programs with a vocational emphasis and two-year vocational schools offering short cycle (associate degree) degree programs of strictly vocational nature.

Second cycle degree holders may apply to third cycle programs if their performance at the first cycle degree level is exceptionally high, and their national central Graduate Education Entrance Examination (ALES) score is also high and their application is approved. The doctoral degree is conferred subject to at least one publication in a cited and refereed journal.

17. EMPLOYMENT OPPORTUNITIES FOR GRADUATES AND ACCESS TO GRADUATE PROGRAMS

17.1. Employment Opportunities for Graduates

Graduates of the Information Systems Engineering program are qualified to work in a wide range of sectors including software development, information systems management, data analytics, cybersecurity, enterprise systems, digital transformation, and technology consulting.

Possible employment positions include information systems engineer, systems analyst, business analyst, IT project manager, database specialist, ERP consultant, and cybersecurity analyst in public institutions, private enterprises, and international organizations.

17.2. Access to Graduate Programs

Graduates may apply to master's and doctoral programs in Information Systems Engineering, Computer Engineering, Software Engineering, Artificial Intelligence, Data Science, and related disciplines, subject to admission requirements.

18. ADDITIONAL INFORMATION

The Information Systems Engineering Undergraduate Program at Near East University is designed in accordance with contemporary engineering and informatics approaches and adopts an interdisciplinary education model that integrates information technologies, software systems, data management, and organizational processes. The program aims to educate engineers who can design, manage, and optimize information systems that support decision-making and digital transformation in diverse sectors.

Difference from Similar Programs

Unlike traditional computer engineering or software engineering programs, the Information Systems Engineering Program emphasizes the integration of technical systems with organizational, managerial, and business processes. In addition to technical competencies, the program focuses on developing students' abilities in system analysis, enterprise information systems, data-driven decision-making, and information security. This interdisciplinary structure enables graduates to act as a bridge between technical teams and organizational management, distinguishing the program from similar engineering disciplines.

Opportunities Offered

Throughout the program, students are provided with opportunities for internships, industry-oriented projects, and collaboration with public and private sector organizations. Career guidance and mentorship are offered by academic staff and industry professionals to support students' professional development. Graduates benefit from the program's strong connections with industry partners, which facilitate employment opportunities in areas such as information systems management, data analytics, cybersecurity, and digital transformation.

Applied Training

The program places strong emphasis on practical and applied training. Students gain hands-on experience through laboratory courses, project-based learning, case studies, and a compulsory graduation project. Practical applications enable students to analyze real-world problems, design information systems solutions, and implement them using contemporary tools and technologies. Team-based projects further enhance students' collaboration and project management skills.

Technologies and Tools Used

During the program, students actively use modern technologies and tools such as database management systems, enterprise resource planning platforms, data analytics and visualization tools, programming environments, cloud computing platforms, cybersecurity tools, and system modeling software. These tools ensure that students acquire up-to-date technical skills aligned with industry standards and emerging technological trends.

Success Stories

Graduates of the Information Systems Engineering Program are employed in various sectors including information technology, finance, healthcare, education, and public institutions. Many graduates work as information systems engineers, systems analysts, IT project managers, data specialists, and cybersecurity professionals, while others pursue postgraduate studies at national and international universities. These outcomes demonstrate the program's effectiveness in preparing students for both professional practice and academic careers.

Additional Activities

The program supports students' multidimensional development through seminars, workshops, guest lectures, webinars, and technical training sessions organized in collaboration with industry experts and academic institutions. Students are encouraged to participate in conferences, innovation competitions, entrepreneurship activities, and student clubs related to information technologies and digital systems.

Additional Resources for Development

Upon completion of the program, graduates are provided with guidance on recommended reference books, online learning platforms, open-access databases, and professional certification programs to support lifelong learning. Information about postgraduate programs, advanced technical certifications, and continuous professional development opportunities is also shared to help graduates sustain and enhance their competencies after graduation.