

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4101	Fundamentals of Programming	3.0	0.0	1.0	3.5	5.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Öğr.Gör.Kasım DELİKANLI						
Course Assistants							
Course Aims	The aim of this course is for the student to gain competencies regarding the fundamentals of programming. The aim of this course is to adopt the algorithmic way of thinking by understanding the principles and stages required to solve any problem. With this algorithmic way of thinking, it is possible to show the solutions developed for problems on flow diagrams using basic programming structures when necessary and to code them in the programming language used for teaching.						
Course Goals	o be able to comprehend the logic of algorithm and programming 2) To be able to create a flow diagram of a problem 3) To be able to realize the program of a problem with a flow diagram 4) To be able to use the programming language development interface and to create a program.						
Course Contents	Algorithm and programming logic, algorithms, flow diagrams, Programming language development environment, constants, variables, operators, control concept and statements, loop concept and loop statements, array logic and arrays,						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Assignment (Homework) Project Work Implementation/Application/Practice						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	25						
Supportive Course	25						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	Knows the basic concepts of programming						
CO2	Identifies problems of different structures and gains the ability to develop algorithms by finding the most appropriate method for their solution.						
CO3	Designs the flow diagram of the program before coding						
CO4	Converts the planned algorithm into code using different programming languages						
CO5	Fixes errors in the code and develops solutions to make the program work more efficiently						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	50	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	4	20	Homeworks	7	4	28	
Attendance	0	0	Presentation	0	0	0	
Application	2	30	Project	0	0	0	

Lab	0	0	Lab Study	14	1	14
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	12	12
Seminary	0	0	Finals	1	16	16
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	140		
The ratio of the term to success	40		Course's ECTS Credit	5		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	[1]Algoritma ve Programlamaya Giriş, Ebubekir Yaşar,Ekin Yayıncılık 2014 [2]Algoritma ve Programlama, Bülent Çobanoğlu Abaküs Kitap 2016 [3]Algoritma Geliştirme ve Programlamaya Giriş Fahri Vatansever SEÇKİN YAYINCILIK 2015 [4]Java Programlama Dili ve Yazılım Tasarımı,Altuğ B. Altıntaş,Papatya Yayıncılı 2010, [5]Java ile Temel Programlama, Bora Güngören, Seçkin Yayıncılık Nisan 2008,
Additional Resources	[1]Algoritma ve Programlamaya Giriş, Ebubekir Yaşar,Ekin Yayıncılık 2014 [2]Algoritma ve Programlama, Bülent Çobanoğlu Abaküs Kitap 2016 [3]Algoritma Geliştirme ve Programlamaya Giriş Fahri Vatansever SEÇKİN YAYINCILIK 2015 [4]Java Programlama Dili ve Yazılım Tasarımı,Altuğ B. Altıntaş,Papatya Yayıncılı 2010, [5]Java ile Temel Programlama, Bora Güngören, Seçkin Yayıncılık Nisan 2008,

Material Sharing

Documents	[1]Algoritma ve Programlamaya Giriş, Ebubekir Yaşar,Ekin Yayıncılık 2014 [2]Algoritma ve Programlama, Bülent Çobanoğlu Abaküs Kitap 2016 [3]Algoritma Geliştirme ve Programlamaya Giriş Fahri Vatansever SEÇKİN YAYINCILIK 2015 [4]Java Programlama Dili ve Yazılım Tasarımı,Altuğ B. Altıntaş,Papatya Yayıncılı 2010, [5]Java ile Temel Programlama, Bora Güngören, Seçkin Yayıncılık Nisan 2008,
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	4
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	2
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1

14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Purpose of the course, introduction, general information about programming	
2	Basic concepts and definitions (software, programming languages, software development tools, number system, compiler, interpreter)	
3	Understanding Algorithm and Programming logic, Algorithm examples	
4	Algorithm development applications (Decision making and loop algorithms)	
5	What are winter diagrams, what are they used for, flow diagram terminology, (Flow diagram examples)	
6	Examples of Flowcharts containing Decision Making and Cycles (Applications with Flowchart Design programs)	
7	Introduction to Programming, variables, constants, data types, operators (mathematical, logical, comparison)	
8	Input-Output commands, Basic screen commands, Sample Applications	
9	Decision (if and multiple if) commands, Sample Applications	
10	Loop commands and Sample Applications	
11	Conditional loop commands, Sample Applications	
12	Basic library functions, Sample Applications	
13	One-Dimensional Arrays	
14	Multidimensional Arrays	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4103	Computer Hardware	2.0	0.0	1.0	2.5	4.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Dr. Öğr. Üyesi Birkan BÜYÜKARIKAN						
Course Assistants	-						
Course Aims	The aim of the course is to learn the hardware structure of the computer, to know the operations of hardware units, to know testing and troubleshooting methods, to have basic operating system information, to install an operating system and frequently used application software, and to manage these software by making settings.						
Course Goals	1) Can obtain basic electronics knowledge 2) Be able to describe computer hardware and equipment (item) functions 3) Can make a test, diagnose and maintain computer systems						
Course Contents	Hardware Structure of Computer, Testing and Maintenance-Repair Processes of Computer Systems, Current Hardware Innovations, Operating System Fundamentals, Process Management, File Management, Device Management and Memory Management						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Implementation/Application/Practice Question-Answer Brainstorming Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	60						
Specialized Field Course	40						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	Knows the basic working principles of the computer						
CO2	Knows the basic components of computer hardware and their functions						
CO3	Knows different types of computers, processor architectures, and storage technologies						
CO4	Knows the basic concepts about the operating system						
CO5	Understand how operating systems manage and use hardware components						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	100	Course Duration (Excluding Exam Week)	14	4	56	
Quiz	0	0	Time Of Studying Out Of Class	14	3	42	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	15	15	

Seminary	0	0	Finals	1	20	20
Field study	0	0	Workload Hour (30)	30		
TOTAL	100		Total Work Charge / Hour	133		
The ratio of the term to success	40		Course's ECTS Credit	4		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.
Additional Resources	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.

Material Sharing

Documents	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	2
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Historical Development of the Computer	
2	Computer Structure and Working Logic	
3	Input Devices of Computer	
4	Computer System Units	
5	Microprocessors	
6	Memory Units	

7	Operating systems	
8	Output Units of the Computer	
9	Computer Storage Units	
10	Additional Devices	
11	System Software	
12	Application Software	
13	Operating System Layers	
14	Process Management, File Management, Device Management and Memory Management	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4105	Database Management System	3.0	0.0	1.0	3.5	5.0	1st Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	Dr. Öğr. Üyesi Nazan KEMALOĞLU ALAGÖZ
Course Assistants	
Course Aims	Database development and basic concepts, database design logic given, Database Management System Application program (SQL Server) visual interface and SQL (Structured Query Language) using the database creation, data processing and querying ability
Course Goals	To know the general structure, features and basic database concepts of database systems Providing database installation and management Creation of queries Transferring information to the database over the web
Course Contents	Basic features of classical file system, advantages, disadvantages, general structure and properties of database systems, basic database concepts (tables, fields, records, keys etc.); Database software, hardware infrastructure, database systems infrastructure, Database Management System (DBMS) installation; Database design, normalization processes (1NF and 2NF, 3NF and 4NF), considerations during design; Data Models (Network, hierarchical, objective, relational), Entity - Relationship (E-R) Diagrams, Entity - Relationship Types and Relations; Transfer from Conceptual Model to Logical Model; Classification of database management systems, Hardware, Software (utilities, Data communication methods), Users, Internal database operations (database security, backup, recovery); Relational database properties, tables, relations, keys, Mathematical infrastructure of relational database, Cartesian product, correlation, relational mathematics, relational mathematical operations; SQL (Structured Query Language), general properties, standardization, data types used in SQL, new data type creation, database creation, table creation (CREATE ..., these operations are also performed with DBMS interface); Making structural changes on tables, deleting existing table, deleting existing database, Data Control Language Commands (ALTER TABLE, DROP TABLE, DROP Operations, GRANT-DENY-REVOKE); Adding records to the table with SQL commands, updating existing records, deleting and querying basic operations, and creating queries using auxiliary commands (SELECT, INSERT, UPDATE, DELETE, ORDER BY, ASC-DESC, WHERE, AND-OR); Arithmetic functions and clustering operations with SQL commands (SUM (), AVG (), MIN (), MAX (), COUNT (), DISTINCT, GROUP BY); Create links between tables using SQL commands, Derived Tables, Create nested queries (Inner JOIN, Outer JOIN, IN-NOT IN, nested SELECT); Create a query with SQL statements using SQL commands, perform grouping during querying (WHERE...AND, GROUP BY-HAVING, EXISTS, NOT EXISTS); Creating View and View operations (CREATE VIEW, ALTER VIEW, DROP View)
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Project Work Implementation/Application/Practice
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	50
Specialized Field Course	25
Supportive Course	25
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	0

COURSE OUTCOMES

C01	Knows the general structure, advantages and disadvantages of Classical File System
C02	Know the basic concepts of database
C03	Know database systems infrastructure and data models
C04	Relational database, basic features, key, knows the relationship types
C05	Perform basic queries on records using SQL commands

CO6	Realize the database design of a system
CO7	Database administrator, application programmer, knows the tasks of the normal user, knows the database internal operations
CO8	SQL (Structured Query Language) knows the data types used, using SQL commands to create a database, tables, Add, update, delete records using SQL commands

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	50	Course Duration (Excluding Exam Week)	14	4	56
Quiz	0	0	Time Of Studying Out Of Class	0	0	0
Homework	0	0	Homeworks	4	2	8
Attendance	0	0	Presentation	0	0	0
Application	1	50	Project	0	0	0
Lab	0	0	Lab Study	14	1	14
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	25	25
Seminary	0	0	Finals	2	25	50
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	153		
The ratio of the term to success	40		Course's ECTS Credit	5		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	1. Ramakrishnan, R., Gehrke, J., & Gehrke, J. (2003). Database management systems (Vol. 3). New York: McGraw-Hill. 2. Ramakrishna, R. (2004). Database Management Systems 2nd Ed.
Additional Resources	1. Ramakrishnan, R., Gehrke, J., & Gehrke, J. (2003). Database management systems (Vol. 3). New York: McGraw-Hill. 2. Ramakrishna, R. (2004). Database Management Systems 2nd Ed.

Material Sharing

Documents	1. Ramakrishnan, R., Gehrke, J., & Gehrke, J. (2003). Database management systems (Vol. 3). New York: McGraw-Hill. 2. Ramakrishna, R. (2004). Database Management Systems 2nd Ed.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	3
3	Follows and effectively uses current developments and practices in the profession.	4
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	5
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	3

7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	3
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	3
10	Follows information in the field and communicates with colleagues using a foreign language.	3
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Basic features, advantages, disadvantages of classical file system, General structure and features of database systems, Basic database concepts (table, field, record, keys, etc.)	
2	Conceptual, Logical, Physical Data Modelling. Data Models (Network, hierarchical, objective, relational), Entity - Relationship (E-R) Diagrams, Entity - Relationship Types and Relationships	
3	Conceptual, Logical, Physical Data Modelling. Data Models (Network, hierarchical, objective, relational), Entity - Relationship (E-R) Diagrams, Entity - Relationship Types and Relationships	
4	Database design, normalisation operations (1NF and 2NF, 3NF and 4NF), points to be considered during design	
5	Database design, normalisation operations (1NF and 2NF, 3NF and 4NF), points to be considered during design	
6	Relational database properties, tables, relations, keys, mathematical infrastructure of relational database, Cartesian product, relation, relational mathematics, relational mathematics operations	
7	SQL (Structured Query language), general features, standardisation, data types used in SQL, creating a new data type, creating a database, creating a table (CREATE ..., these operations are also performed with the VTYS interface)	
8	SQL (Structured Query language), general features, standardisation, data types used in SQL, creating a new data type, creating a database, creating a table (CREATE ..., these operations are also performed with the VTYS interface)	
9	Making structural changes on tables, deleting the existing table, deleting the existing database, Data Control Language Commands (ALTER TABLE, DROP TABLE, DROP Operations, GRANT-DENY-REVOKE)	
10	Making structural changes on tables, deleting the existing table, deleting the existing database, Data Control Language Commands (ALTER TABLE, DROP TABLE, DROP Operations, GRANT-DENY-REVOKE)	
11	Adding records to the table with SQL commands, updating existing records, deleting and basic query operations, creating queries using constraints and auxiliary commands (SELECT, INSERT, UPDATE, DELETE, ORDER BY, ASC-DESC, WHERE, AND-OR)	
12	Arithmetic functions and clustering operations with SQL commands (SUM(), AVG(), MIN(), MAX(), COUNT(), DISTINCT, GROUP BY)	
13	Creating connections between tables using SQL commands, Derived Tables, creating nested queries (Inner JOIN, Outer JOIN, IN-NOT IN, nested SELECT)	
14	Creating queries with WHERE statement between tables using SQL commands, performing grouping during querying (WHERE..AND, GROUP BY-HAVING, EXISTS, NOT EXISTS), Backup	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4107	Network Fundamentals	2.0	0.0	1.0	2.5	4.0	1st Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	Öğr. Gör. Osman CEYLAN
Course Assistants	
Course Aims	Make students acquainted with the knowledge of technologies that infrastructure computer networks, and capable of setting up a basic computer network
Course Goals	
Course Contents	Introduction to data and computer communication, Data transmission, Network topologies, Computer networks and classification, OSI reference model, items used in computer networks, IP addressing mechanism, Auxiliary network commands, Network cables
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Implementation/Application/Practice
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	50
Specialized Field Course	50
Supportive Course	0
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	0

COURSE OUTCOMES

CO1	Define network elements, network types and network topologies.
CO2	Knows and uses the structured cabling of a network system.
CO3	Have knowledge about OSI reference model, layers and TCP/IP.
CO4	Understand network devices, network addressing and subnetting.
CO5	Knows auxiliary network commands and can explain security issues.
CO6	Can set up a computer network, detect and repair errors.
CO7	Can understand the OSI Model and OSI layers, define OSI layer properties, and also explain in which OSI layer network devices operate.

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	100	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	3	42
Homework	0	0	Homeworks	0	0	0
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	0	0	0
Lab	0	0	Lab Study	5	2	10
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	7	7
Seminary	0	0	Finals	1	10	10

Field study	0	0	Workload Hour (30)	30
TOTAL	100		Total Work Charge / Hour	111
The ratio of the term to success	40		Course's ECTS Credit	4
The ratio of final to success	60			
TOTAL	100			

Recommended or Required Reading

Textbook	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.
Additional Resources	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.

Material Sharing

Documents	Ders esnasında anlatılan sunum ve görseller. Ders sonrasında tüm ders katılımcıları ile paylaşılmaktadır.
Assignments	
Exams	midterm and final exam
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	2
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	2
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	2
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	2
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	4
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	2
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Networks	
2	Network Definition and Basic Concepts	
3	Network Types and Network Topologies	
4	OSI Referans Modeli	
5	Network Devices	
6	Network Cables	
7	UTP Cable Construction	

Contribution
3
1
2
2
2
1
1
1
1
1
2
4
1
2

8	Wireless Communication Technologies	
9	TCP/IP Protocol Set	
10	IP Addressing Mechanism	
11	IP Addressing Mechanism	
12	Network Services	
13	Auxiliary Network Commands	
14	Information and Network Security	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4109	Office Software and Advanced Spreadsheet Applications	2.0	0.0	1.0	2.5	3.0	1st Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	Öğr.Gör. Mustafa BIÇAKLI
Course Assistants	Şenol ALDIBAŞ, Libre Ofis Writer Tübitak Ulakbim Şenol ALDIBAŞ, Libre Ofis Calc Tübitak Ulakbim Şenol ALDIBAŞ, Libre Ofis ImpressKullanım Kılavuzu Tübitak Ulakbim
Course Aims	To enable our students to use the word processing, spreadsheet and presentation programs which are office applications effectively.
Course Goals	1. Prepare documents with word processing program.2. Should be able to work on calculations, formulas, data, summary tables and create accurate results with spreadsheet program.3. Should be able to communicate a given topic to the audience by preparing effective presentations.
Course Contents	LibreOfis Writer, word processing program, menu and shortcuts to the introduction, use of selection tools (word, sentence, paragraph selections, etc.). Formatting and use of form painter. Working with tables. Adding / deleting new rows to tables, joining cells, and so on. To make page settings. Use the header-subheading hierarchy. Preparing a table of contents. Prepare cover page. Number the page. Using the header / footer. Output preview. Print out. To set the data types (integer, string, date / time, etc.) entered into cells in spreadsheet program. Sort cell information. Use calculations and formulas. Ready to use functions. Formatting and conditional formatting. Pivot table to create data analysis. Use form components. Create / edit / delete macros / assign shortcuts. Preparing pages in presentation program. Switch between pages, set timing and effects. Add text, graphics, ready shapes and video / animation to pages. Create and use templates
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Implementation/Application/Practice Web Based Learning
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	30
Specialized Field Course	10
Supportive Course	60
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	0

COURSE OUTCOMES

CO1	Uses the menus of the word processing program. Knows the shortcuts.
CO2	Creates macros. Uses printer output preview.
CO3	In the spreadsheet program, it adjusts the data (integer, string, date/time...) entered into the cells. It performs calculations with the relationships between cells.
CO4	Uses ready functions. Creates/edits/deletes/assigns shortcuts to macros.
CO5	Analyzes data with summary tables.

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	30	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	1	14
Homework	7	20	Homeworks	7	2	14

Attendance	0	0	Presentation	2	2	4
Application	0	0	Project	0	0	0
Lab	0	0	Lab Study	14	1	14
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	1	1
Seminary	0	0	Finals	1	1	1
Field study	0	0	Workload Hour (30)	0		
TOTAL	50		Total Work Charge / Hour	90		
The ratio of the term to success	50		Course's ECTS Credit	3		
The ratio of final to success	50					
TOTAL	100					

Recommended or Required Reading

Textbook	Şenol ALDIBAŞ, Libre Ofis Writer Tübitak Ulakbim Şenol ALDIBAŞ, Libre Ofis Calc Tübitak Ulakbim Şenol ALDIBAŞ, Libre Ofis ImpressKullanım Kılavuzu Tübitak Ulakbim
Additional Resources	

Material Sharing

Documents	
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	5
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	4
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	5
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	4
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	3
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	2
8	Has awareness of career management and lifelong learning.	2
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	3
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	3
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	3
15		

Course Content

Week	Topics	Study Materials
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1	LibreOfis writer screen, Toolbars and properties, Save, Security options, Page Setup, Writing in Word, Font properties, Format painter, Paragraph properties, Tabs, Border and Shading, Columns, Bullets and numbering	
2	Insert Table and toolbar in LibreOfis Writer, Insert drawing object, Templates, Auto-correction options, Custom paste, Find-Replace-Go, Insert thumbnail and picture, use of picture toolbar	
3	Header-footer insertion, page numbering, page break insertion, formatting text headings and subheadings, create a table of contents, Create a cover page	
4	Creating a form in Libreoffice Writer (text box, check box, option button, list box, combo box, etc.), Macro usage (create, edit, assign shortcuts)	
5	Introduction to Libreoffice Calc (Excel), Page and Cell Concept, Cursor Types, Page Tabs, Cut-Copy-Paste, Row and Column Operations	
6	LibreOfis Calc (Excel) - Meeting Toolbars, Working with Files, Browsing Worksheets	
7	Operators, Formulation, Cell Formatting, Drawing Objects, Graphics	
8	Create a pivot table	
9	LibreOffice Calc (Excel) Macro operations (save, edit, assign shortcuts, delete macros)	
10	LibreOffice Calc (Excel) Using form objects	
11	LibreOffice Calc (Excel) Enter data using a form	
12	Creating presentations with LibreOffice impress (Powerpoint).	
13	Slide transitions, effects, timing	
14	Styles and formatting. Add a picture, use the gallery	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4111	Fundamentals of Health and Medical Terminology	2.0	0.0	0.0	2.0	2.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Öğr. Gör. Sevde Nur KUTLU						
Course Assistants							
Course Aims	The aim of this education is to provide the student with the ability to write medical terms correctly, pronounce medical terms correctly, and analyze medical terms correctly. It is aimed to create a terminological infrastructure for the subjects of medicine. Thus, the student is provided with a better understanding of the subject and an innovative/developer perspective is gained in health information systems.						
Course Goals							
Course Contents	History of medical terminology, Basic concepts, definitions and rules, Roots that form medical terms, Prefixes that form medical terms, Suffixes that form medical terms, Medical terms related to the movement system, Medical terms related to the cardiovascular system, Medical terms related to the respiratory system, Medical terms related to the nervous system, Medical terms related to the endocrine system, Medical terms related to the digestive system, Medical terms related to the blood and blood-forming organs terms, Medical terms related to the urinary system, Medical terms related to the skin, Medical terms related to the oncology.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Reading Assignment (Homework) Project Work Web Based Learning Question-Answer Case-Study Problem solving Individual Study Opinion Development Technique Mind-Maps-Flowcharts Using Games						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	60						
Specialized Field Course	20						
Supportive Course	20						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
C01	Terminological medical knowledge and basic rules of medical terminology are learned.						
C02	Latin medical definitions are understandable.						
C03	Defines the basic terms and concepts related to health.						
C04	Terminologically, the concepts of disease/symptom/threpy/surgical are defined.						
C05	The hospital uses e-information systems more easily and adopts the approach of developing health systems.						
C06	Can work in common areas with other healthcare professionals without experiencing conceptual confusion.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	60	Course Duration (Excluding Exam Week)	14	2	28	

Quiz	1	5	Time Of Studying Out Of Class	14	1	14
Homework	1	10	Homeworks	1	14	14
Attendance	1	5	Presentation	1	2	2
Application	0	0	Project	1	2	2
Lab	0	0	Lab Study	0	0	0
Project	1	10	Field Study	0	0	0
Workshop	0	0	Visas	1	6	6
Seminary	0	0	Finals	1	6	6
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	72		
The ratio of the term to success	40		Course's ECTS Credit	2		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Tıbbi Terminoloji E-kitap, E-sözlük Temel Tıbbi Terminoloji Kitabı, (Ed.) Doç. Dr. İlker İlhanlı, Nanna Cross, Y.H. Hui, Peggy Stanfield. NOBEL Akademik Yayıncılık Sağlık Hizmetlerinde Tıbbi Terminoloji Kitabı, Prof. Dr. Elif Dikmetaş
Additional Resources	Tıbbi Terminoloji E-kitap, E-sözlük Temel Tıbbi Terminoloji Kitabı, (Ed.) Doç. Dr. İlker İlhanlı, Nanna Cross, Y.H. Hui, Peggy Stanfield. NOBEL Akademik Yayıncılık Sağlık Hizmetlerinde Tıbbi Terminoloji Kitabı, Prof. Dr. Elif Dikmetaş

Material Sharing

Documents	Tıbbi Terminoloji E-kitap, E-sözlük Temel Tıbbi Terminoloji Kitabı, (Ed.) Doç. Dr. İlker İlhanlı, Nanna Cross, Y.H. Hui, Peggy Stanfield. NOBEL Akademik Yayıncılık Sağlık Hizmetlerinde Tıbbi Terminoloji Kitabı, Prof. Dr. Elif Dikmetaş
Assignments	1. Solving the puzzles given at the end of the lesson according to the weekly topic. The dateline is the following week. 2. Researching and presenting a medical terminology digital material; the presentation time is the last week of the lesson.
Exams	1 Midterm Exam 1 Final Exam 1 Presentation and/or Project
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	2
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	2
3	Follows and effectively uses current developments and practices in the profession.	2
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	3
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	2
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	3

7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	3
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	3
11	Explains medical terminology and health data standards.	4
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	2
13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	History of medical terminology, Basic concepts, definitions and rules	Q&A, Puzzle, Reading
2	Roots that form medical terms	Q&A, Puzzle, Reading
3	Prefixes that form medical terms, Suffixes that form medical terms	Q&A, Puzzle, Reading
4	Medical terms related to the movement system	Q&A, Puzzle, Reading
5	Medical terms related to the cardiovascular system	Q&A, Puzzle, Reading
6	Medical terms related to the respiratory system	Q&A, Puzzle, Reading
7	Medical terms related to the nervous system	Q&A, Puzzle, Reading
8	Medical terms related to the endocrine system	Q&A, Puzzle, Reading
9	Medical terms related to the digestive system	Q&A, Puzzle, Reading
10	Medical terms related to the blood and blood-forming organs terms	Q&A, Puzzle, Reading
11	Medical terms related to the urinary system	Q&A, Puzzle, Reading
12	Medical terms related to the derm	Q&A, Puzzle, Reading
13	Medical terms related to the ophthalmic and ear	Q&A, Puzzle, Reading
14	student presentation	Q&A, Puzzle, Reading

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4113	Digital Health Ecosystem	2.0	0.0	0.0	2.0	2.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Öğr. Gör. Osman CEYLAN						
Course Assistants							
Course Aims	The main aim of this course is to introduce Digital Health Systems Technician students to the digital health ecosystem, which plays a critical role in the delivery of modern healthcare services. It is intended for students to comprehensively grasp the ecosystem's fundamental concepts, stakeholders, technological components (AI, IoT, VR, etc.), data standards (HL7, DICOM), and the national health informatics applications in Turkey (e.g., e-Nabız, MHRS, ITS). Course Objectives (Learning Objectives) Upon successful completion of this course, students will be able to: Define and differentiate fundamental concepts such as Digital Health, E-Health, and M-Health. Explain the stakeholders (public, providers, tech vendors, patients) that constitute the digital health ecosystem and their roles within the system. Define the functions of core health information systems like HIS (HBYS), EHR, and PACS and their place in healthcare. Discuss the importance of interoperability in health data and the role of fundamental standards like HL7 and DICOM in this ecosystem. Analyze the impact of Industry 4.0 technologies—such as wearables, artificial intelligence, and virtual reality—on healthcare services, using national applications (e.g., e-Nabız, MHRS) as examples.						
Course Goals							
Course Contents	This course covers the fundamentals of the digital health ecosystem, its stakeholders, Industry 4.0 technologies, data standards like HL7/DICOM, and national applications such as e-Nabız/MHRS.						
Prerequisites and Co-requisities Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Brainstorming						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	40						
Specialized Field Course	0						
Supportive Course	20						
Skill, Communication, and Administration Skills Course	10						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	Defines and differentiates key concepts like Digital Health, E-Health, and M-Health.						
CO2	Explains the stakeholders (public, provider, patient, etc.) in the digital health ecosystem and their roles.						
CO3	Defines the functions of core health information systems like HIS, EHR, and PACS.						
CO4	Explains the importance of interoperability in health and the role of standards like HL7 and DICOM.						
CO5	Analyzes the impact of AI and wearables on healthcare and national applications like e-Nabız.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	100	Course Duration (Excluding Exam Week)	14	2	28	
Quiz	0	0	Time Of Studying Out Of Class	14	1	14	

Homework	0	0	Homeworks	0	0	0
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	0	0	0
Lab	0	0	Lab Study	0	0	0
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	10	10
Seminary	0	0	Finals	1	10	10
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	62		
The ratio of the term to success	40		Course's ECTS Credit	2		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Haftalı ders sunusu ve Sağlık Bakanlığı kaynakları
Additional Resources	Haftalı ders sunusu ve Sağlık Bakanlığı kaynakları

Material Sharing

Documents	Haftalı ders sunusu ve Sağlık Bakanlığı kaynakları
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	4
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	2
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	2
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	2
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	2
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	3
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		1

Course Content

Week	Topics	Study Materials
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1	Introduction to the Digital Health Ecosystem	-
2	Global and national digital health trends	-
3	Stakeholders; Patients, health professionals, institutions, technology providers	-
4	Stakeholders; Public-private partnerships	-
5	Digital Health Infrastructures	-
6	Regulations in Digital Health	-
7	Digital Health Policies in Turkey	-
8	e-Nabız, MHRS, HYS and other national systems	-
9	Digital Transformation Strategy in Health	-
10	Tele-Health and Mobile Health Solutions	-
11	Future Trends and Innovative Technologies	-
12	Personalized medicine and genomic data analysis	-
13	Ethical and Legal Issues in Digital Health	-
14	General review	-

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4201	Medical Devices	2.0	0.0	0.0	2.0	3.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Öğr. Gör. Dr. Arzu Ulusoy Öğr. Gör. Elif Çukur Oğuz						
Course Assistants							
Course Aims	The aim of this course is to provide students of Digital Health Systems Technology with knowledge about the basic operating principles, classification, application areas, safety, maintenance, and calibration processes of medical devices used in healthcare services. The course aims to enable students to recognize medical devices, evaluate their basic technical features, and understand their relationship with digital health systems.						
Course Goals							
Course Contents	This course covers the definition and classification of medical devices, basic biomedical measurement principles, patient monitoring systems, electrocardiography devices, medical imaging systems, intensive care devices, laboratory equipment, sterilization systems, integration with digital health technologies, device safety, calibration, maintenance, and quality management.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Assignment (Homework) Report Writing Conducting an Experiment						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	30						
Supportive Course	20						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
C01	Explain the basic operating principles of medical devices.						
C02	Classify medical devices according to their application areas.						
C03	Recognize common devices used for patient monitoring, diagnosis, and treatment.						
C04	Evaluate safety, maintenance, and calibration requirements of medical devices.						
C05	Explain the integration of medical devices with digital health systems.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	80	Course Duration (Excluding Exam Week)	14	2	28	
Quiz	0	0	Time Of Studying Out Of Class	0	0	0	
Homework	1	20	Homeworks	2	10	20	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	1	10	10	

Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	10	10
Seminary	0	0	Finals	1	10	10
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	83		
The ratio of the term to success	40		Course's ECTS Credit	3		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Öğretim Elemanı Ders Notları
Additional Resources	Öğretim Elemanı Ders Notları

Material Sharing

Documents	Öğretim Elemanı Ders Notları
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Medical Devices and Basic Concepts	
2	Classification of Medical Devices	
3	Biomedical Measurement Principles and Sensors	
4	Patient Monitors and Vital Signs Monitoring	

5	Electrocardiography (ECG) and Cardiology Devices	
6	Respiratory System and Ventilator Devices	
7	Infusion Pumps and Therapeutic Devices	
8	Medical Imaging Systems (X-ray, CT, MRI, US)	
9	Laboratory and Diagnostic Devices	
10	Sterilization and Infection Control Devices	
11	Medical Device Safety and Electrical Safety	
12	Calibration, Maintenance, and Fault Management	
13	Medical Devices Integrated with Digital Health Systems	
14	General Evaluation and Student Presentations	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4203	Professional foreign language	2.0	0.0	0.0	2.0	3.0	3rd Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	Öğr. Gör. Osman CEYLAN
Course Assistants	-
Course Aims	Gaining basic professional concepts and definitions and basic professional foreign language competence to students
Course Goals	
Course Contents	Techniques for reading, understanding and translating professional English texts. Listening and understanding practice Speaking practices.
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Reading Assignment (Homework) Report Writing
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	0
Specialized Field Course	0
Supportive Course	70
Skill, Communication, and Administration Skills Course	30
Transferable Skills Course	0

COURSE OUTCOMES

CO1	He/she uses the knowledge and skills he/she has in his/her field in his/her profession and daily life within the framework of legal and ethical rules.
CO2	Use introductory terms to programming and algorithms
CO3	Using Hardware and Software error and help messages
CO4	Using network error and help messages
CO5	Prepares CV, applies for jobs and conducts interviews in a foreign language.
CO6	Has knowledge about information technologies and the use of the internet and technology in education and can use this knowledge effectively in teaching English.

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	60	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	1	14
Homework	1	40	Homeworks	2	3	6
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	0	0	0
Lab	0	0	Lab Study	0	0	0
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	10	10
Seminary	0	0	Finals	1	10	10

Field study	0	0	Workload Hour (30)	0
TOTAL	100		Total Work Charge / Hour	82
The ratio of the term to success	40		Course's ECTS Credit	3
The ratio of final to success	60			
TOTAL	100			

Recommended or Required Reading

Textbook	Jones, A. 2003; C Sharp Programmer's Cookbook, Microsoft Yayınları. Platt D.S. 2001; Introducing Microsoft .NET, Microsoft Yayınları. Amirjonav, A. 2007; Java Programming For Students, Bileşim Yayınları Teknik Kitaplar. Kolektif, 2004; Assessing Network Security, Microsoft Yayınları. Vitt, E./ Luckevich, M./ Misner, S.; Business Intelligence, Microsoft yayınları.
Additional Resources	Jones, A. 2003; C Sharp Programmer's Cookbook, Microsoft Yayınları. Platt D.S. 2001; Introducing Microsoft .NET, Microsoft Yayınları. Amirjonav, A. 2007; Java Programming For Students, Bileşim Yayınları Teknik Kitaplar. Kolektif, 2004; Assessing Network Security, Microsoft Yayınları. Vitt, E./ Luckevich, M./ Misner, S.; Business Intelligence, Microsoft yayınları.

Material Sharing

Documents	Jones, A. 2003; C Sharp Programmer's Cookbook, Microsoft Yayınları. Platt D.S. 2001; Introducing Microsoft .NET, Microsoft Yayınları. Amirjonav, A. 2007; Java Programming For Students, Bileşim Yayınları Teknik Kitaplar. Kolektif, 2004; Assessing Network Security, Microsoft Yayınları. Vitt, E./ Luckevich, M./ Misner, S.; Business Intelligence, Microsoft yayınları.
Assignments	-
Exams	Midterm exam Final
Additional Material	-

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	2
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	2
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	1
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	2
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	5
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
------	--------	-----------------

Contribution
2
1
3
2
1
2
1
2
1
5
1
1
1
1

1	Updating and repetition of general English knowledge that will form the basis of professional foreign language competencies.	Taking the ING-101 course
2	Updating and repetition of general English knowledge that will form the basis of professional foreign language competencies.	Taking the ING-101 course
3	Professional terms, concepts and terminology	Taking the ING-101 course
4	Operating system installation documents	Taking the ING-101 course
5	Operating system error messages	Taking the ING-101 course
6	Operating system help files	Taking the ING-101 course
7	Program language error messages	Taking the ING-101 course
8	Program language error messages	Taking the ING-101 course
9	Programming language help files	Taking the ING-101 course
10	Programming language help files	Taking the ING-101 course
11	Terms used in programming language	Taking the ING-101 course
12	Terms used in programming language	Taking the ING-101 course
13	Computer peripherals documentation	Taking the ING-101 course
14	Computer peripherals documentation	Taking the ING-101 course

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4205	Quality Management in Healthcare Services	3.0	0.0	0.0	3.0	3.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors							
Course Assistants							
Course Aims	To provide students with knowledge of quality management concepts, quality standards, accreditation processes, and continuous improvement approaches in healthcare services; and to develop the skills necessary to contribute to the implementation of quality management systems in healthcare institutions.						
Course Goals							
Course Contents	Concept and historical development of quality, total quality management, quality standards in healthcare services, quality indicators, patient safety, risk management, performance measurement in healthcare, accreditation systems, Healthcare Quality Standards (SKS), quality improvement tools, process management, patient satisfaction, implementation of quality management systems in healthcare institutions, and practices for developing a culture of quality.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Reading Assignment (Homework) Question-Answer Discussion with a small group Brainstorming Problem solving Individual Study Opinion Development Technique Mind-Maps-Flowcharts						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	40						
Specialized Field Course	30						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	25						
Transferable Skills Course	5						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	1	60	Time Of Studying Out Of Class	14	3	42	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	1	1	
Seminary	0	0	Finals	1	1	1	
Field study	0	0	Workload Hour (30)	0			

TOTAL	100	Total Work Charge / Hour	90
The ratio of the term to success	40	Course's ECTS Credit	3
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	Course notes consist of presentations prepared by the instructor, in-class practice materials, Healthcare Quality Standards (SKS) guidelines, patient safety resources, and up-to-date materials related to quality management systems in healthcare services.
Additional Resources	Healthcare Quality Standards (SKS) Hospital Set, Ministry of Health. Publications of the Department of Quality and Accreditation in Healthcare. Current books and articles on Total Quality Management and its applications in healthcare. Patient Safety and Risk Management guidelines. Publications of national and international accreditation organizations.

Material Sharing

Documents	
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Concept of Quality and Importance of Quality in Healthcare Services	Basic research on the concept of quality
2	Historical Development of Quality Management	Reading about quality pioneers
3	Total Quality Management and Its Principles	Review of TQM principles
4	Quality Standards in Healthcare Services	Research on healthcare quality standards

5	Quality Indicators and Performance Measurement in Healthcare	Reviewing performance indicator examples
6	Patient Safety and Medical Errors	Research on patient safety practices
7	Risk Management and Safety Culture	Review of risk management examples
8	Midterm Examination	Review of the first seven weeks
9	Accreditation Systems in Healthcare	Research on accreditation organizations
10	Healthcare Quality Standards (SKS)	Review of SKS documents
11	Process Management and Continuous Improvement	Review of process management examples
12	Patient Satisfaction and Service Quality	Research on patient satisfaction measurement methods
13	Quality Management System Applications in Healthcare Institutions	Review of quality management system applications
14	General Evaluation	Review of semester topics

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4251	Open Source Operating System	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Öğr. Gör. Dr. Caner KARA						
Course Assistants							
Course Aims	To introduce students to the concepts of free software and open source and to provide them with the ability to recognize and effectively use an operating system licensed within the framework of these concepts.						
Course Goals							
Course Contents	Open source and free software concepts, basic operating system concepts, operating system structure and tasks, installation of an open source operating system and utilities, basic commands in open source operating systems, use of administrative tools in open source operating systems, configuration of network settings						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Implementation/Application/Practice						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	25						
Supportive Course	25						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	Explains the basic concepts, tasks and historical development process of operating systems; comprehends the license types and histories of free software, open source and UNIX/Linux operating systems.						
CO2	Applies basic system administration skills using basic terminal commands, file system structure, file and folder manipulation, user and group organization and access settings in UNIX-like operating systems.						
CO3	In UNIX-like operating systems, it keeps the system active and up-to-date using text editors, system monitoring tools, scheduled tasks and package management.						
CO4	Gains basic knowledge of network configuration, network monitoring tools and network security in UNIX-like operating systems; configures and monitors network connections.						
CO5	Performs system administration and maintenance processes effectively with the combined use of graphical user interface and terminal-based tools; selects the appropriate operating system by comparing the features of different distributions.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	3	42	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	10	10	
Seminary	0	0	Finals	1	10	10	

Field study	0	0	Workload Hour (30)	0
TOTAL	50		Total Work Charge / Hour	106
The ratio of the term to success	50		Course's ECTS Credit	4
The ratio of final to success	50			
TOTAL	100			

Recommended or Required Reading

Textbook	Hajek, J., 2015. Understanding Free and Opensource Operating Systems, The Technology and Philosophy Of - Part I Shotts, W., 2019. The Linux Command Line, 5th Internet Ed. Silberschatz, A., Galvin P., B., Gagne, G., 2013. Operating System Concepts, John Wiley & Sons.
Additional Resources	Hajek, J., 2015. Understanding Free and Opensource Operating Systems, The Technology and Philosophy Of - Part I Shotts, W., 2019. The Linux Command Line, 5th Internet Ed. Silberschatz, A., Galvin P., B., Gagne, G., 2013. Operating System Concepts, John Wiley & Sons.

Material Sharing

Documents	Hajek, J., 2015. Understanding Free and Opensource Operating Systems, The Technology and Philosophy Of - Part I Shotts, W., 2019. The Linux Command Line, 5th Internet Ed. Silberschatz, A., Galvin P., B., Gagne, G., 2013. Operating System Concepts, John Wiley & Sons.
Assignments	2 Online Quizzes
Exams	Online Quiz, Mid-term exam and Final Exam
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	5
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	4
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	3
13	Performs integration of health information systems in healthcare institutions.	3
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
------	--------	-----------------

Contribution
5
1
3
4
3
1
1
1
1
1
1
1
3
3
1

1	Operating System, Basic Concepts and Tasks	
2	History of Free Software and Open Source	
3	GNU/Linux Distributions and User Graphical Interfaces (GUI)	
4	System Init Types and File System	
5	Basic Commands in Linux-Based Operating Systems	
6	File and Directory Management in Linux-Based Operating Systems	
7	User and Permission Management in Linux-Based Operating Systems	
8	File Viewing and Editing in Linux-Based Operating Systems	
9	Text Editors Used in Linux-Based Operating Systems	
10	Application Installation and Package Management in Linux-Based Operating Systems	
11	Disk Management in Linux-Based Operating Systems	
12	Viewing System and Network Information on Linux-Based Operating Systems	
13	Scheduled Tasks in Linux-Based Operating Systems	
14	Future Trends in Linux-Based Operating Systems	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4253	Cloud Computing and Virtualization Technologies	2.0	0.0	1.0	2.5	4.0	3rd Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Elective
Course Instructors	Öğr. Gör. Dr. Caner KARA
Course Assistants	-
Course Aims	The aim of this course is to teach students the basic concepts, architecture and application areas of cloud computing and virtualisation technologies; to gain the ability to design and implement systems suitable for real world problems by understanding cloud-based solutions.
Course Goals	
Course Contents	Cloud computing definition, history, architecture, advantages and disadvantages, services, deployment and service models, future trends, virtualization technologies such as Hypervisor Type-1 and Type-2, container and dockerization and their use in cloud computing
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Assignment (Homework) Implementation/Application/Practice
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	50
Specialized Field Course	50
Supportive Course	0
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	0

COURSE OUTCOMES

CO1	Gains knowledge of basic definitions, components, architectural structure.
CO2	Compares different cloud service models (IaaS, PaaS, SaaS) and deployment models.
CO3	Gains hands-on installation and management skills on virtual machines and containers.
CO4	Implement security, data management and disaster recovery strategies in cloud environments.
CO5	Discusses the effects of technological developments in the business world by following current cloud computing trends.

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	80	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	2	28
Homework	1	20	Homeworks	1	14	14
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	0	0	0
Lab	0	0	Lab Study	14	2	28
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	2	2
Seminary	0	0	Finals	1	2	2
Field study	0	0	Workload Hour (30)	0		

TOTAL	100	Total Work Charge / Hour	116
The ratio of the term to success	50	Course's ECTS Credit	4
The ratio of final to success	50		
TOTAL	100		

Recommended or Required Reading

Textbook	Cloud Computing Bible, Barrie Sosinsky, Wiley; 1 E (January 11, 2011), ISBN: 0470903562 Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online, Micheal Miller, QUE, 2009, ISBN:0-7897-3803-1 Cloud Computing, A Practical Approach, Toby Velte, Anthony Velte, Robert Elsenpeter, McGraw Hill, 2009, ISBN: 0071626948 Cloud Computing for Dummies, J.Hurwitz, M.Kaufman, F.Halper, R.Bloor, WILEY, 2010, ISBN: 978-0-470-48470-8 The Cloud at Your Service, Manning Publications Co., Jothy Rosenberg, Arthur Mateos, ISBN: 9781935182528
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Additional Resources	Cloud Computing Bible, Barrie Sosinsky, Wiley; 1 E (January 11, 2011), ISBN: 0470903562 Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online, Micheal Miller, QUE, 2009, ISBN:0-7897-3803-1 Cloud Computing, A Practical Approach, Toby Velte, Anthony Velte, Robert Elsenpeter, McGraw Hill, 2009, ISBN: 0071626948 Cloud Computing for Dummies, J.Hurwitz, M.Kaufman, F.Halper, R.Bloor, WILEY, 2010, ISBN: 978-0-470-48470-8 The Cloud at Your Service, Manning Publications Co., Jothy Rosenberg, Arthur Mateos, ISBN: 9781935182528
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Material Sharing

Documents	Cloud Computing Bible, Barrie Sosinsky, Wiley; 1 E (January 11, 2011), ISBN: 0470903562 Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online, Micheal Miller, QUE, 2009, ISBN:0-7897-3803-1 Cloud Computing, A Practical Approach, Toby Velte, Anthony Velte, Robert Elsenpeter, McGraw Hill, 2009, ISBN: 0071626948 Cloud Computing for Dummies, J.Hurwitz, M.Kaufman, F.Halper, R.Bloor, WILEY, 2010, ISBN: 978-0-470-48470-8 The Cloud at Your Service, Manning Publications Co., Jothy Rosenberg, Arthur Mateos, ISBN: 9781935182528
Assignments	
Exams	Homework, Mid Term, Final Exam
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	3
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	2
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	2
11	Explains medical terminology and health data standards.	3

12	Uses, manages, controls, and maintains health information systems, automation, and databases.	3
13	Performs integration of health information systems in healthcare institutions.	3
14	Designs and develops software interfaces, graphics, and visual elements.	2
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Cloud Computing	
2	Introduction to Cloud Computing	
3	Cloud Computing Architecture	
4	Virtualization Technologies	
5	Cloud Computing Services	
6	Security in Cloud Computing	
7	Cloud Computing Standards	
8	Cloud Computing Deployment Models	
9	Container Technologies and Dockerization	
10	Artificial Intelligence and Big Data in Cloud Computing	
11	Cloud Storage and Data Management	
12	Serverless Computing	
13	Disaster Recovery and Backup in Cloud Computing	
14	Future Trends in Cloud Computing	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4255	Advanced Programming	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Doç Dr. Birkan BÜYÜKARIKAN						
Course Assistants	-						
Course Aims	The aim of the course is to master the related programming language at the basic and advanced level and to be able to use advanced programming techniques effectively to solve complex problems and develop various applications.						
Course Goals							
Course Contents	Related programming language recognition and Basic-Advanced Applications, Mathematical and Alphabetical Operations, Operations Related to Lists and Matrices, Working with Function Structure, Application Development with Object-Oriented Programming (OOP), File Systems and Debugging Methods						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Question-Answer Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	30						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
C01	Writes basic and advanced programs						
C02	Works with data structures and mathematical functions						
C03	Uses functional and object-oriented programming approaches						
C04	Uses filing operations.						
C05	Performs debugging operations.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	100	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	14	1	14	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	10	10	
Seminary	0	0	Finals	1	15	15	
Field study	0	0	Workload Hour (30)	0			

TOTAL	100	Total Work Charge / Hour	109
The ratio of the term to success	40	Course's ECTS Credit	4
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	1) Kent D. Lee, ""Python Programming Fundamentals"", 2nd edition, Springer 2) Tony Gaddis, ""Starting out With Python"", 4th edition, Pearson"
Additional Resources	1) Kent D. Lee, ""Python Programming Fundamentals"", 2nd edition, Springer 2) Tony Gaddis, ""Starting out With Python"", 4th edition, Pearson"

Material Sharing

Documents	1) Kent D. Lee, ""Python Programming Fundamentals"", 2nd edition, Springer 2) Tony Gaddis, ""Starting out With Python"", 4th edition, Pearson"
Assignments	Weekly homework
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	4
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	4
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	3
15		

Course Content

Week	Topics	Study Materials
1	Introduction to programming, basic concepts and introduction of the editors used.	
2	Data types and Decision mechanisms	
3	Loops and Control Statements	
4	Lists and control structures	
5	Matrices (Multiple lists)	
6	Mathematical operations	
7	Methods and structures	

8	String operations	
9	Object oriented programming - Method overloading - Static and In-Class methods - Accessing class properties	
10	File procedures	
11	Exception catching and debugging	
12	Data processing	
13	Data visualization	
14	Process and Threads	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4257	Mobile Programming	2.0	0.0	1.0	2.5	4.0	3rd Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Elective
Course Instructors	Öğr. Gör. Osman CEYLAN
Course Assistants	
Course Aims	To be able to develop applications on Flutter and Android operating systems.
Course Goals	
Course Contents	Database Operations, Access to Restful Web Services. Developing mobile applications with Dart Programming Language, Flutter Widget structures.
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Implementation/Application/Practice Report Writing Web Based Learning
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	30
Specialized Field Course	60
Supportive Course	10
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	0

COURSE OUTCOMES

CO1	Learns Dart programming language.
CO2	Learns the Flutter framework structure.
CO3	Can make a mobile application with Flutter.
CO4	He/She can make projects with his/her friends
CO5	Can make database connections with Flutter.

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	20	Course Duration (Excluding Exam Week)	3	14	42
Quiz	0	0	Time Of Studying Out Of Class	1	5	5
Homework	1	20	Homeworks	1	20	20
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	1	20	20
Lab	0	0	Lab Study	0	0	0
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	10	10
Seminary	0	0	Finals	1	10	10
Field study	0	0	Workload Hour (30)	0		
TOTAL	40		Total Work Charge / Hour	107		

The ratio of the term to success	40	Course's ECTS Credit	4
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	Seçkin Yayıncılık Cihan Üretkin Flutter ile Mobil Uygulama Geliştirme
Additional Resources	Seçkin Yayıncılık Cihan Üretkin Flutter ile Mobil Uygulama Geliştirme

Material Sharing

Documents	Seçkin Yayıncılık Cihan Üretkin Flutter ile Mobil Uygulama Geliştirme
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	1
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	1
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	2
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	2
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	2
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	3
11	Explains medical terminology and health data standards.	3
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	4
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Dart Programming	
2	Variable Definitions	
3	If-Else Structures and Loops	
4	Widgets operations	
5	Giving Objects Clickability, Dialogs	
6	Grid Structures	
7	Creating a Menu	
8	Form Widgets	

9	Date and Time Operations	
10	Firebase Database structure	
11	Authentication Service	
12	Sample Application	
13	Sample Application	
14	Sample Application	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4259	Data Mining	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Doç Dr. Birkan BÜYÜKARIKAN						
Course Assistants	-						
Course Aims	The aim of the course is to find and extract useful information from the dataset and use the discovered information to help explain the current situation and predict future occurrences.						
Course Goals							
Course Contents	Introduction to data mining, Current Technologies and Tools Used in Data Mining, Ready-made Programs Used in Data Mining, Data mining processes, Classification in data mining, Decision Trees and Analysis of Decision Rules, Clustering and Similarity Measures, Association rule, Regression methods, Feature selection and Dimensionality reduction, Web Mining in Data Mining						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Assignment (Homework) Implementation/Application/Practice Question-Answer Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	40						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	Knows the basic concepts of data mining						
CO2	Knows data mining techniques and popular tools						
CO3	Analyzes raw data and uses data preprocessing techniques to transform it into a format						
CO4	Knows basic data mining methods such as classification, clustering and association rules						
CO5	Selects appropriate performance metrics to measure the performance of data mining models						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	50	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	10	2	20	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	1	10	Project	1	30	30	
Lab	1	10	Lab Study	0	0	0	
Project	1	30	Field Study	0	0	0	
Workshop	0	0	Visas	1	10	10	
Seminary	0	0	Finals	1	15	15	

Field study	0	0	Workload Hour (30)	0
TOTAL	100		Total Work Charge / Hour	117
The ratio of the term to success	40		Course's ECTS Credit	4
The ratio of final to success	60			
TOTAL	100			

Recommended or Required Reading

Textbook	Haftalık ders notları Veri Madenciliği Yöntemleri, Yalçın Özkan, Papatya Yayıncılık, 2016.
Additional Resources	Haftalık ders notları Veri Madenciliği Yöntemleri, Yalçın Özkan, Papatya Yayıncılık, 2016.

Material Sharing

Documents	Haftalık ders notları Veri Madenciliği Yöntemleri, Yalçın Özkan, Papatya Yayıncılık, 2016.
Assignments	Data mining applications on selected datasets
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	2
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	3
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	4
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	2
15		

Course Content

Week	Topics	Study Materials
1	Introduction to data mining	
2	Current Technology and Tools Used in Data Mining, Ready-made Programs Used in Data Mining	
3	Data mining processes	
4	Data mining processes	
5	Classification in data mining	

Contribution
3
1
2
3
4
1
1
1
2
1
1
1
1
2

6	Classification in data mining	
7	Evaluation of Classification Methods: Performance Metrics and Confusion Matrix	
8	Analysis of Decision Trees and Decision Rules	
9	Clustering and Similarity Measures	
10	Clustering Methods	
11	Association rule	
12	Regression	
13	Feature selection and Dimensionality reduction	
14	Web Mining in Data Mining	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4261	Introduction to Artificial Intelligence	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Dr. Öğr. Üyesi Durmuş KOÇ						
Course Assistants							
Course Aims	The aim of the course is to introduce students to the concepts and fundamentals of Artificial Intelligence (AI), teach the basic algorithms in the field of AI, and demonstrate how these techniques can be applied to solve real-world problems. The course focuses on understanding and utilizing modern AI techniques such as machine learning, neural networks, and deep learning. Additionally, students will gain the skills necessary to develop AI applications.						
Course Goals							
Course Contents	The course content begins with the definition, historical development, and application areas of AI, followed by machine learning and algorithms such as Naive Bayes, K-Nearest Neighbors, Decision Trees, and SVM. It also covers neural networks and deep learning algorithms (CNN, RNN), as well as natural language processing and image processing techniques. Throughout the course, students will work on hands-on AI projects using real-world datasets and engage in discussions about ethical AI and the social implications of AI.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Reading Assignment (Homework) Project Work Implementation/Application/Practice Question-Answer Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	30						
Supportive Course	10						
Skill, Communication, and Administration Skills Course	5						
Transferable Skills Course	5						
COURSE OUTCOMES							
CO1	Students learn artificial intelligence concepts and basic algorithms.						
CO2	Students understand how to use AI techniques in their applications.						
CO3	Students learn modern artificial intelligence techniques such as machine learning and deep learning and can use them in practical projects.						
CO4	Students can develop applications for the use of artificial intelligence.						
CO5	Students can create artificial intelligence models by working with real-world data sets.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	50	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	4	56	
Homework	1	50	Homeworks	1	14	14	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	

Lab	0	0	Lab Study	0	0	0
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	1	1	1
Seminary	0	0	Finals	1	1	1
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	114		
The ratio of the term to success	40		Course's ECTS Credit	4		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook Demirkol, Zafer. "Herkes İçin Yapay Zekâ." Genç Destek Yayınları, 3. Baskı.

Additional Resources Demirkol, Zafer. "Herkes İçin Yapay Zekâ." Genç Destek Yayınları, 3. Baskı.

Material Sharing

Documents Demirkol, Zafer. "Herkes İçin Yapay Zekâ." Genç Destek Yayınları, 3. Baskı.

Assignments It will be given by the instructor within the scope of the department topics.

Exams It consists of a midterm and a final exam.

Additional Material

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	2
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	3
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	2
8	Has awareness of career management and lifelong learning.	2
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	3
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	3
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Artificial Intelligence	AI definitions, history
2	Problem Solving and Search Algorithms	Study search algorithms
3	Machine Learning: Basics and Types	Study learning types

4	Regression and Classification Algorithms	Study regression, classification
5	Decision Trees and Ensemble Methods	Study decision trees, ensemble methods
6	Neural Networks: Introduction and Perceptron Model	Study neural networks, perceptron
7	Deep Learning and Convolutional Neural Networks	Study CNN, image processing
8	Deep Learning and Convolutional Neural Networks, Midterm Exam	Review topics from weeks 1 to 7
9	Natural Language Processing (NLP)	Study NLP basics
10	Reinforcement Learning: Basics and Applications	Study reinforcement learning
11	Unsupervised Learning: Clustering and Dimensionality Reduction	Study clustering techniques
12	AI in Real-World Applications	Research real-world AI applications
13	AI Ethics and Future Directions	Study AI ethics
14	Future Applications of Artificial Intelligence	Research future AI technologies

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4263	Software Architectures	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Öğr.Gör.Dr. Caner KARA						
Course Assistants							
Course Aims	Software Architectures course aims to teach students software development process management, architectural design principles, styles and patterns that can be used in software projects. The course addresses important aspects of software systems such as performance, security, scalability, while providing knowledge about current architectural approaches and future trends. Students learn how to apply layered, service-oriented, distributed systems and cloud architectures when designing large and complex software projects.						
Course Goals							
Course Contents	Software Engineering, software development process management, architectural design principles, styles and patterns and current architectural approaches.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Question-Answer						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	25						
Supportive Course	25						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
C01	Understands and applies different software development processes.						
C02	Models the structure and behavior of software systems.						
C03	Applies software architecture quality specifications and design principles.						
C04	Selects and applies different software architecture styles and design patterns.						
C05	Follows software architecture trends and keeps track of future architectures.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	3	42	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	10	10	
Seminary	0	0	Finals	1	10	10	
Field study	0	0	Workload Hour (30)	0			
TOTAL	50		Total Work Charge / Hour	106			

The ratio of the term to success	50	Course's ECTS Credit	4
The ratio of final to success	50		
TOTAL	100		

Recommended or Required Reading

Textbook	Richard N Taylor, Nenad Medvidovic, Eric M Dashofy, 2010. Software Architecture Foundations Len Bass, Paul Clements, Rick Kazman, 2021. Software Architecture in Practice Cesare Pautasso, 2023. Software Architecture: Visual Lecture Notes Roger Pressman, Bruce Maxim. Software Engineering: A Practitioner's Approach, McGraw Hill
Additional Resources	Richard N Taylor, Nenad Medvidovic, Eric M Dashofy, 2010. Software Architecture Foundations Len Bass, Paul Clements, Rick Kazman, 2021. Software Architecture in Practice Cesare Pautasso, 2023. Software Architecture: Visual Lecture Notes Roger Pressman, Bruce Maxim. Software Engineering: A Practitioner's Approach, McGraw Hill

Material Sharing

Documents	Richard N Taylor, Nenad Medvidovic, Eric M Dashofy, 2010. Software Architecture Foundations Len Bass, Paul Clements, Rick Kazman, 2021. Software Architecture in Practice Cesare Pautasso, 2023. Software Architecture: Visual Lecture Notes Roger Pressman, Bruce Maxim. Software Engineering: A Practitioner's Approach, McGraw Hill
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	5
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	4
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	5
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	4
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1

13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	2
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Software Architecture	
2	Software Development Life Cycle and Models	
3	Software Quality Attributes	
4	Fundamentals for Software Architecture: OOP, Abstraction and Cohesion	
5	Components and Connectors	
6	SOLID Principles	
7	Software Architecture Styles and Architectural Views	
8	Architectural Documentation and Architecture Decision Records (ADR)	
9	Structural UML Diagrams	
10	Behavioral UML Diagrams	
11	Creational Design Patterns	
12	Structural Design Patterns	
13	Behavioral Design Patterns	
14	Future Trends and Applications in Software Architecture	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4265	Internet of Things and Wearable Technology	2.0	0.0	1.0	2.5	4.0	3rd Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Elective
Course Instructors	
Course Assistants	
Course Aims	To introduce the fundamental concepts of the Internet of Things (IoT) and wearable technologies, examine their applications in healthcare, provide knowledge about sensor technologies, data collection, wireless communication, and remote monitoring systems, and enable students to understand and utilize IoT-based systems in digital healthcare applications.
Course Goals	
Course Contents	Concept of the Internet of Things, IoT architecture, sensors and actuators, wireless communication technologies, wearable technologies, healthcare IoT applications, remote patient monitoring systems, data collection and processing, cloud computing, big data, security and privacy, smart healthcare devices, and current application examples.
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Project Work Implementation/Application/Practice Question-Answer Screening Discussion with a small group Individual Study
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	40
Specialized Field Course	40
Supportive Course	0
Skill, Communication, and Administration Skills Course	0
Transferable Skills Course	10

COURSE OUTCOMES

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	60	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	2	28
Homework	2	15	Homeworks	3	5	15
Attendance	0	0	Presentation	0	0	0
Application	0	0	Project	1	10	10
Lab	0	0	Lab Study	5	3	15
Project	1	25	Field Study	0	0	0
Workshop	0	0	Visas	1	4	4
Seminary	0	0	Finals	1	6	6
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	120		
The ratio of the term to success	100		Course's ECTS Credit	4		

The ratio of final to success	0	
TOTAL	100	

Recommended or Required Reading

Textbook	Course notes prepared by the instructor, IoT application documents, wearable healthcare technology reports, and current scientific resources.
Additional Resources	Internet of Things: Principles and Paradigms Designing Connected Products Healthcare Internet of Things Current articles on IoT and Digital Health Ministry of Health Digital Health Reports

Material Sharing

Documents	Course presentations IoT application examples Arduino and ESP32 application notes Sensor data collection examples Healthcare IoT case studies Scientific articles Data privacy and security documents
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to the Internet of Things and Historical Development	
2	Introduction to IoT Architecture	
3	Sensors and Actuators	
4	Wireless Communication Technologies (Wi-Fi, Bluetooth, ZigBee, LoRa)	

5	IoT Hardware Platforms (Arduino, Raspberry Pi, ESP32)	
6	Data Acquisition and Sensor Networks	
7	Cloud Computing and IoT Integration	
8	Midterm Examination	
9	Introduction to Wearable Technologies	
10	Smart Watches and Health Monitoring Systems	
11	Remote Patient Monitoring Systems	
12	Remote Patient Monitoring Systems	
13	IoT Security, Data Privacy and Personal Data Protection	
14	Healthcare IoT Projects and Current Applications	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4267	Bioinformatics	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	To provide fundamental knowledge and skills for the computer-aided analysis of biological and healthcare data; and to introduce the use of genomics, proteomics, biological databases, and bioinformatics tools in healthcare applications.						
Course Goals							
Course Contents	Introduction to bioinformatics, biological data types, DNA, RNA and protein structures, biological databases, sequence analysis, genomics and proteomics applications, bioinformatics software, healthcare data analysis, personalized medicine, and artificial intelligence applications in bioinformatics.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Implementation/Application/Practice Question-Answer Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	35						
Specialized Field Course	40						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	10						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	60	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	2	15	Homeworks	2	5	10	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	2	25	Lab Study	4	4	16	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	6	6	
Seminary	0	0	Finals	1	10	10	
Field study	0	0	Workload Hour (30)	0			
TOTAL	100		Total Work Charge / Hour	120			
The ratio of the term to success	40		Course's ECTS Credit	4			
The ratio of final to success	60						
TOTAL	100						
Recommended or Required Reading							

Textbook	Course notes prepared by the instructor, biological database user guides, BLAST tutorials, and current scientific articles.
Additional Resources	Bioinformatics for Dummies Bioinformatics and Functional Genomics Introduction to Bioinformatics NCBI Training Materials EMBL-EBI Bioinformatics Resources
Material Sharing	
Documents	Course presentations NCBI database applications BLAST application examples Genomic data analysis examples Scientific articles Project and application documents
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Bioinformatics	
2	Biological Data Types	
3	DNA and RNA Structures	
4	Protein Structures and Functions	
5	Biological Databases	
6	Introduction to Sequence Analysis	
7	BLAST and Basic Bioinformatics Tools	
8	Midterm Examination	

9	Genomics and Genome Analysis	
10	Proteomics and Protein Analysis	
11	Artificial Intelligence Applications in Bioinformatics	
12	Personalized and Precision Medicine	
13	Healthcare Data Analysis	
14	Current Approaches in Bioinformatics	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4269	Digital Electronics	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	To teach the fundamental concepts of digital electronics, number systems, logic gates, combinational and sequential circuits; and to enable students to understand the operating principles of digital systems used in healthcare technologies and analyze basic digital circuits.						
Course Goals							
Course Contents	Number systems and conversions, Boolean algebra, logic gates, truth tables, Karnaugh maps, combinational circuits, encoders, decoders, multiplexers, sequential circuits, flip-flops, counters, shift registers, and digital electronics applications.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Implementation/Application/Practice Question-Answer Screening Discussion with a small group Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	30						
Supportive Course	10						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	10						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	4	56	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	1	10	Homeworks	3	4	12	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	2	20	Lab Study	4	3	12	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	4	4	
Seminary	0	0	Finals	1	8	8	
Field study	0	0	Workload Hour (30)	0			
TOTAL	70		Total Work Charge / Hour	120			
The ratio of the term to success	40		Course's ECTS Credit	4			
The ratio of final to success	60						

TOTAL		100	
Recommended or Required Reading			
Textbook	Course notes prepared by the instructor, application handouts, laboratory manuals, and supplementary instructional materials.		
Additional Resources	Floyd, Digital Fundamentals. Tokheim, Digital Electronics. Mano & Ciletti, Digital Design. Digital Electronics Laboratory Applications. Current technical documentation and datasheets.		
Material Sharing			
Documents	Course presentations Laboratory manuals Sample digital circuit applications Logic gate simulation files Datasheet examples Practice questions and solutions		
Assignments	Exercises on number systems and conversions. Problem-solving assignments on Boolean algebra and logic gates. Design and analysis of combinational and sequential circuits. Digital circuit simulation using appropriate software tools. Research and presentation on digital electronics applications in healthcare technologies.		
Exams			
Additional Material			
Planned Learning Activities and Teaching Methods			
Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)			
Work Placements			
As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.			
Program Learning Outcomes			
No	Course's Contribution to Program		Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.		
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.		
3	Follows and effectively uses current developments and practices in the profession.		
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.		
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.		
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.		
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.		
8	Has awareness of career management and lifelong learning.		
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.		
10	Follows information in the field and communicates with colleagues using a foreign language.		
11	Explains medical terminology and health data standards.		
12	Uses, manages, controls, and maintains health information systems, automation, and databases.		
13	Performs integration of health information systems in healthcare institutions.		
14	Designs and develops software interfaces, graphics, and visual elements.		
15			
Course Content			
Week	Topics	Study Materials	
1	Review of the basic concepts of digital electronics.		
2	Review of number systems and coding techniques.		
3	Review of Boolean algebra rules.		

4	Review of the operating principles of logic gates.	
5	Review of logic circuit analysis methods.	
6	Review of logic simplification using Karnaugh maps.	
7	Review of combinational logic circuits.	
8	Midterm Exam	
9	Review of encoders, decoders and multiplexers.	
10	Review of the operating principles of flip-flop circuits.	
11	Review of the applications of counter circuits.	
12	Review of the operation of shift registers.	
13	Review of programmable logic devices and their applications.	
14	Review of digital electronics applications in healthcare technologies.	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4271	Software Development	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to teach students the fundamental stages of the software development process and modern software development approaches and to develop practical skills in requirements analysis, software design, coding, testing, debugging, version control, data management, and software deployment. Students are expected to develop modular, maintainable, and secure software solutions according to specified requirements, effectively use software development tools, and implement basic software projects for problems in health informatics.						
Course Goals							
Course Contents	Introduction to software development; software development life cycle; software development models and agile approaches; requirements analysis; user requirements and use cases; software design and modular programming; object-oriented software development; coding standards and clean code principles; error handling and debugging; version control systems; database-driven applications; APIs and web services; software testing; secure software development; software documentation; deployment and maintenance processes; software development applications in health informatics.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Implementation/Application/Practice Question-Answer Screening Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	20						
Specialized Field Course	50						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	5						
Transferable Skills Course	15						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	1	10	Homeworks	2	3	6	
Attendance	0	0	Presentation	0	0	0	
Application	2	25	Project	1	10	10	
Lab	0	0	Lab Study	5	3	15	
Project	1	25	Field Study	0	0	0	
Workshop	0	0	Visas	1	5	5	
Seminary	0	0	Finals	1	5	5	
Field study	0	0	Workload Hour (30)	0			

TOTAL	100	Total Work Charge / Hour	120
The ratio of the term to success	40	Course's ECTS Credit	4
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, software development practice sheets, sample source codes, project scenarios, and laboratory exercises.
Additional Resources	Current books on software development, object-oriented programming, software engineering, version control, software testing, APIs and web services, database programming, and secure software development; official documentation of programming languages and development tools; and current technical resourc

Material Sharing

Documents	Course presentations, laboratory sheets, sample source codes, requirements analysis examples, use cases, UML examples, version control exercises, API documentation, test scenarios, error logs, project documents, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Software Development and Basic Concepts	
2	Software Development Life Cycle and Development Models	
3	Requirements Analysis, User Requirements and Use Cases	
4	Software Design, Modularity and Code Organization	
5	Object-Oriented Software Development	
6	Clean Code, Coding Standards and Reusability	

7	Version Control Systems and Collaborative Software Development	
8	Database-Driven Software Applications - Midterm Examination	
9	Database-Driven Software Applications	
10	Using APIs and Web Services	
11	Error Handling, Debugging and Logging	
12	Software Testing and Quality Assurance	
13	Secure Software Development and Data Security	
14	Software Documentation, Deployment and Maintenance	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4273	Clinical Decision Support Systems	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to teach students the fundamental concepts, components, and operating principles of clinical decision support systems and to develop knowledge and skills regarding the use of healthcare data in clinical decision-making processes. Students are expected to understand rule-based, knowledge-based, and data-driven decision support approaches, integration with hospital information systems and electronic health records, evaluate artificial intelligence-based applications, and interpret security, ethical, and user interaction aspects of clinical decision support systems.						
Course Goals							
Course Contents	Introduction to clinical decision support systems; clinical decision-making processes; components and architectures of decision support systems; knowledge-based and rule-based systems; clinical information and data sources; integration with electronic health records; clinical alerts, reminders, and recommendation systems; computerized clinical guidelines; data-driven decision support; artificial intelligence and machine learning-based clinical decision support; prediction and risk classification systems; evaluation of clinical decision support systems; explainability and user interaction; patient safety, information security, privacy, and ethics; clinical decision support applications and case studies.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Implementation/Application/Practice Question-Answer Screening Discussion with a small group Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	25						
Specialized Field Course	50						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	15						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	50	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	1	15	Homeworks	2	4	8	
Attendance	0	0	Presentation	0	0	0	
Application	1	20	Project	0	0	0	
Lab	0	0	Lab Study	4	3	12	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	5	5	
Seminary	0	0	Finals	1	5	5	

Field study	0	0	Workload Hour (30)	0
TOTAL	100		Total Work Charge / Hour	120
The ratio of the term to success	40		Course's ECTS Credit	4
The ratio of final to success	60			
TOTAL	100			

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, clinical decision support system application examples, clinical scenarios, sample healthcare datasets, and practice materials.
Additional Resources	Current books on clinical decision support systems, health informatics, electronic health records, and artificial intelligence applications in healthcare; scientific articles; clinical guidelines; and technical documents related to health information systems and clinical decision support systems.

Material Sharing

Documents	Course presentations, practice sheets, clinical case scenarios, decision rule examples, decision trees, clinical alert examples, sample healthcare datasets, clinical guideline examples, scientific articles, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Clinical Decision Support Systems and Basic Concepts	
2	Clinical Decision-Making Process and Decision Support Approaches	
3	Components and Architecture of Clinical Decision Support Systems	
4	Knowledge-Based and Rule-Based Clinical Decision Support Systems	
5	Clinical Data Sources and Electronic Health Records	

[illegible]

6	Integration of Clinical Decision Support Systems with HIS and EHR	
7	Clinical Alerts, Reminders and Recommendation Systems	
8	Midterm Examination	
9	Clinical Guidelines and Computerized Clinical Protocols	
10	Data-Driven Clinical Decision Support Systems	
11	AI and Machine Learning-Based Clinical Decision Support	
12	Clinical Prediction, Risk Assessment and Classification Systems	
13	Performance and Evaluation of Clinical Decision Support Systems	
14	Explainability, User Interaction and Human Factors	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4275	Visual Programming	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to teach students the fundamental features of visual programming environments and the event-driven programming approach and to develop practical skills in user interface design, basic programming structures, forms and components, data validation, file operations, and database connectivity. Students are expected to develop user-friendly, data-driven, and basic desktop applications for health informatics using visual programming tools.						
Course Goals							
Course Contents	Introduction to visual programming; development environment and project structure; event-driven programming; variables, data types, and operators; conditional and loop structures; methods and functions; form design and visual interface components; event handling; data validation and error handling; menus and multi-form applications; file operations; fundamental concepts of object-oriented programming; database connectivity and CRUD operations; development of user interfaces for healthcare data; and visual programming applications in health informatics.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Implementation/Application/Practice Web Based Learning Question-Answer Screening Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	25						
Specialized Field Course	45						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	20						

COURSE OUTCOMES

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	45	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	2	28
Homework	1	15	Homeworks	2	3	6
Attendance	0	0	Presentation	0	0	0
Application	2	25	Project	1	10	10
Lab	0	0	Lab Study	5	3	15
Project	1	15	Field Study	0	0	0
Workshop	0	0	Visas	1	5	5
Seminary	0	0	Finals	1	5	5
Field study	0	0	Workload Hour (30)	0		

TOTAL	100	Total Work Charge / Hour	120
The ratio of the term to success	40	Course's ECTS Credit	4
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, visual programming practice sheets, sample source codes, and laboratory exercises.
Additional Resources	Current books on visual programming, object-oriented programming, user interface design, and database programming; official documentation of the programming language and development environment; sample applications and online learning resources.

Material Sharing

Documents	Course presentations, laboratory sheets, sample source codes, form design examples, programming exercises, database connection examples, health informatics application scenarios, project documents, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Visual Programming and Development Environment	
2	Project Structure, Forms and Visual Interface Components	
3	Variables, Data Types and Operators	
4	Conditional Structures and User Interactions	
5	Loops and Repetitive Operations	
6	Methods, Functions and Code Organization	

7	Event-Driven Programming and Event Handling	
8	Midterm Examination	
9	Advanced Form Components and User Interface Design	
10	Data Validation, Error and Exception Handling	
11	Multiple Forms, Menus and Data Transfer Between Forms	
12	File Operations and Data Storage	
13	Database Connectivity and CRUD Operations	
14	Visual Programming Applications for Healthcare Data	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4277	Visual Programming	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors	Dr. Öğr. Üyesi Durmuş KOÇ						
Course Assistants							
Course Aims	The aim of this course is to teach students the fundamental concepts of medical imaging and image processing and to develop basic knowledge and practical skills in the acquisition, organization, enhancement, segmentation, analysis, and visualization of medical images. Students are expected to recognize images obtained from different medical imaging modalities, apply fundamental image processing techniques, extract meaningful features from medical images, and evaluate the applications of image processing and artificial intelligence in healthcare.						
Course Goals							
Course Contents	Introduction to medical image processing; fundamentals of digital images; pixels, resolution, grayscale, and color concepts; medical imaging modalities; X-ray, CT, MRI, ultrasound, and other imaging modalities; DICOM standard and medical image storage; image histograms; contrast and brightness operations; image enhancement; noise and filtering; geometric transformations; thresholding; image segmentation; morphological operations; edge detection; feature extraction; measurement and analysis of medical images; introduction to image classification; applications of artificial intelligence and deep learning in medical imaging; medical image processing applications.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Project Work Implementation/Application/Practice Screening Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	25						
Specialized Field Course	50						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	10						

COURSE OUTCOMES

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	45	Course Duration (Excluding Exam Week)	14	3	42
Quiz	0	0	Time Of Studying Out Of Class	14	2	28
Homework	1	15	Homeworks	2	3	6
Attendance	0	0	Presentation	0	0	0
Application	2	25	Project	1	8	8
Lab	0	0	Lab Study	5	3	15
Project	1	15	Field Study	0	0	0
Workshop	0	0	Visas	1	5	5
Seminary	0	0	Finals	1	5	5
Field study	0	0	Workload Hour (30)	0		

TOTAL	100	Total Work Charge / Hour	120
The ratio of the term to success	40	Course's ECTS Credit	4
The ratio of final to success	60		
TOTAL	100		

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, medical image processing practice sheets, sample medical images, DICOM files, sample source codes, and laboratory exercises.
Additional Resources	Current books on medical image processing, digital image processing, and medical imaging systems; technical resources on the DICOM standard; documentation of image processing software and libraries; open-access medical image datasets; and current scientific articles.

Material Sharing

Documents	Course presentations, laboratory sheets, sample medical images, DICOM examples, image processing exercises, sample source codes, image histograms, filtering and segmentation examples, case studies, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Medical Image Processing and Basic Concepts	
2	Digital Image Structure: Pixels, Resolution, Grayscale and Color	
3	Medical Imaging Modalities: X-Ray, CT, MRI and Ultrasound	
4	DICOM Standard and Medical Image Storage	
5	Image Histograms, Brightness and Contrast Operations	
6	Image Enhancement, Noise Reduction and Filtering	

7	Geometric Transformations and Image Preprocessing	
8	Thresholding and Image Segmentation Methods - Midterm Examination	
9	Thresholding and Image Segmentation Methods	
10	Morphological Image Processing	
11	Edge Detection and Object Boundary Identification	
12	Feature Extraction and Measurement from Medical Images	
13	Introduction to Medical Image Analysis and Classification	
14	Artificial Intelligence and Deep Learning in Medical Imaging	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4279	Server Management	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to teach students the fundamental structure of server systems, installation and configuration of server operating systems, user and authorization management, configuration of network services, storage, backup, security, and system monitoring. Students are expected to install server systems, configure basic services, monitor system resources, perform security and backup operations, and manage server infrastructures according to the requirements of health information systems.						
Course Goals							
Course Contents	Introduction to server systems; server hardware and operating systems; installation and basic configuration of server operating systems; user, group, and authorization management; file systems, disk, and storage management; network configuration; DHCP and DNS services; file and sharing services; web servers and basic web services; remote access and administration; virtualization and virtual servers; server security, firewalls, and access control; backup, restoration, and disaster recovery; performance monitoring, log management, and troubleshooting; server infrastructure, continuity, and security in health information systems.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Laboratory Assignment (Homework) Project Work Screening Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	35						
Specialized Field Course	45						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	15						
COURSE OUTCOMES							
CO1	Knows the objects, Physical and Logical Structure of the Active Directory Structure.						
CO2	It recognizes Active Directory Services and makes its installation and settings.						
CO3	Creates and applies Group Policy Objects. Knows Domain and Trust relationships.						
CO4	Recognizes the RDS service, installs it, makes its settings and knows how to apply it.						
CO5	Recognizes the RAS,NAP,WSUS, WDS, PRINT MANAGMENT service, installs it, makes its settings and knows how to apply it.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	45	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	1	15	Homeworks	2	3	6	
Attendance	0	0	Presentation	0	0	0	

Application	2	25	Project	1	8	8
Lab	0	0	Lab Study	5	3	15
Project	1	15	Field Study	0	0	0
Workshop	0	0	Visas	1	5	5
Seminary	0	0	Finals	1	5	5
Field study	0	0	Workload Hour (30)	30		
TOTAL	100		Total Work Charge / Hour	120		
The ratio of the term to success	40		Course's ECTS Credit	4		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, server administration laboratory sheets, configuration examples, command-line exercises, and sample system administration scenarios.
Additional Resources	Current books on server operating systems, network services, system administration, virtualization, server security, backup, and disaster recovery; official documentation for operating systems and server software; current technical documents and practical resources.

Material Sharing

Documents	Course presentations, laboratory sheets, installation and configuration guides, command examples, user and permission management exercises, DNS/DHCP configuration examples, web server applications, virtualization scenarios, security checklists, backup scenarios, log examples, and troubleshooting exercises.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	1
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	1
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	1
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	1
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
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1	Introduction to Server Systems and Basic Concepts	
2	Server Hardware, Operating Systems and Server Architectures	
3	Server Operating System Installation and Basic Configuration	
4	User, Group and Permission Management	
5	File Systems, Disk and Storage Management	
6	Network Configuration and Basic Network Services on Servers	
7	Configuration of DNS and DHCP Services	
8	File, Sharing and Access Services	
9	File, Sharing and Access Services	
10	Web Server and Basic Web Services Administration	
11	Remote Server Administration and Secure Access	
12	Virtualization and Virtual Server Management	
13	Server Security, Firewall and Access Control	
14	Backup, Restoration and Disaster Recovery	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4281	Big Data Analytics in Healthcare	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to teach students the concept of big data, the fundamental components of big data technologies, and their applications in healthcare, and to develop knowledge and practical skills in collecting, storing, processing, analyzing, and interpreting large-scale data obtained from different healthcare data sources. Students are expected to understand the healthcare big data ecosystem, evaluate structured and unstructured healthcare data, use fundamental big data analytics tools and methods, and assess big data applications in terms of security, privacy, and ethics.						
Course Goals							
Course Contents	Big data and healthcare big data concepts; fundamental characteristics of big data; big data sources in healthcare; electronic health records, medical images, laboratory data, wearable device and sensor data; structured, semi-structured, and unstructured data; big data lifecycle; data collection and integration; data quality and preprocessing; big data storage approaches; relational and NoSQL databases; data warehouse and data lake concepts; distributed data processing; introduction to Hadoop and Spark ecosystems; big data analytics; identification of patterns and trends in healthcare data; applications of artificial intelligence and machine learning to large-scale healthcare data; data visualization; real-time healthcare data analytics; security, privacy, and ethics in healthcare big data; applications and case studies.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Project Work Implementation/Application/Practice Question-Answer Screening Problem solving Individual Study						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	20						
Specialized Field Course	55						
Supportive Course	5						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	10						
COURSE OUTCOMES							
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	45	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	2	28	
Homework	1	15	Homeworks	2	3	6	
Attendance	0	0	Presentation	0	0	0	
Application	2	25	Project	1	8	8	
Lab	0	0	Lab Study	5	3	15	
Project	1	15	Field Study	0	0	0	

Workshop	0	0	Visas	1	5	5
Seminary	0	0	Finals	1	5	5
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	120		
The ratio of the term to success	40		Course's ECTS Credit	4		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, big data analytics practice sheets, sample healthcare datasets, data processing exercises, and laboratory materials.
Additional Resources	Current books on big data, healthcare analytics, data engineering, NoSQL databases, distributed data processing, and artificial intelligence; technical documentation of big data platforms; open healthcare datasets; current scientific articles and case studies on big data analytics in healthcare.

Material Sharing

Documents	Course presentations, laboratory sheets, sample large-scale healthcare datasets, data cleaning and transformation exercises, NoSQL examples, distributed data processing scenarios, data analytics examples, case studies, scientific articles, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Introduction to Big Data and Big Data in Healthcare	
2	Fundamental Characteristics and Lifecycle of Big Data	
3	Big Data Sources and Data Types in Healthcare	

4	Healthcare Data Collection, Integration and Data Quality	
5	Data Cleaning and Preprocessing in Big Data	
6	Big Data Storage Approaches, NoSQL and Data Lakes	
7	Distributed Data Processing and Big Data Architectures	
8	Introduction to Hadoop and Spark Ecosystems - Midterm Examination	
9	Analysis and Exploratory Analytics of Large-Scale Healthcare Data	
10	Identification of Patterns, Trends and Relationships in Healthcare Big Data	
11	Healthcare Big Data Analytics with Artificial Intelligence and Machine Learning	
12	Real-Time Healthcare Data and Stream Analytics	
13	Visualization and Interpretation of Healthcare Big Data	
14	Security, Privacy, Ethics and Case Applications of Big Data in Healthcare	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
DSS-4283	Next Generation Technologies	2.0	0.0	1.0	2.5	4.0	3rd Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Elective						
Course Instructors							
Course Assistants							
Course Aims	The aim of this course is to introduce students to the fundamental concepts, operating principles, and development trends of current and emerging technologies and to develop their ability to evaluate the applications of these technologies in healthcare and digital health systems. Students are expected to understand innovative technologies such as artificial intelligence, the Internet of Things, cloud and edge computing, blockchain, augmented and virtual reality, digital twins, robotics, next-generation communication technologies, and quantum technologies, and to evaluate their potential benefits, limitations, security, and ethical implications in healthcare.						
Course Goals							
Course Contents	Introduction to emerging technologies and technological transformation; artificial intelligence and generative AI; Internet of Things and smart systems; cloud and edge computing; big data and advanced analytics; blockchain and distributed ledger technologies; augmented reality, virtual reality, and mixed reality; digital twin technologies; robotics and intelligent automation; 5G/6G and next-generation communication technologies; wearable and connected technologies; introduction to quantum computing; cybersecurity, privacy, and ethics in emerging technologies; emerging technology applications in healthcare; future technologies and evaluation of technology trends.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Laboratory Assignment (Homework) Implementation/Application/Practice Question-Answer						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	50						
Specialized Field Course	50						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
CO1	It explains the fundamental concepts, development processes, and application areas of next-generation technologies.						
CO2	This study compares technologies such as artificial intelligence, the Internet of Things, cloud computing, big data, and blockchain in terms of their fundamental characteristics.						
CO3	It analyzes the applications of next-generation technologies in different sectors and identifies suitable technology use cases.						
CO4	Cybersecurity evaluates technological applications in terms of data privacy, ethics, and sustainability.						
CO5	They develop an innovative solution or project proposal that utilizes next-generation technologies to address a real-world problem.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	100	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	3	42	
Homework	0	0	Homeworks	14	3	42	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	

Lab	0	0	Lab Study	0	0	0
Project	0	0	Field Study	0	0	0
Workshop	0	0	Visas	0	0	0
Seminary	0	0	Finals	0	0	0
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	126		
The ratio of the term to success	40		Course's ECTS Credit	4		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Course notes and presentations prepared by the instructor, application examples of emerging technologies, case studies, current technology reports, and technical documents.
Additional Resources	Current books, scientific articles, technology reports, and industry publications on artificial intelligence, IoT, cloud and edge computing, big data, blockchain, XR, digital twins, robotics, next-generation communication technologies, and quantum computing.

Material Sharing

Documents	Course presentations, technology reports, scientific articles, case studies, application examples, technical documents, academic evaluations of current technology developments, and study questions.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	1
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	1
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	1
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	1
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	1
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	1
13	Performs integration of health information systems in healthcare institutions.	1
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Introduction to next-generation technologies, digital transformation, and Industry 4.0–5.0	

2	Fundamental concepts of artificial intelligence, machine learning, and deep learning.	
3	Generative AI, large language models, and efficient request generation.	
4	Internet of Things: Sensors, connectivity technologies, and smart systems.	
5	Data collection, monitoring, and basic prototyping in IoT applications.	
6	Cloud computing, service models, and cloud-based applications.	
7	Edge computing, fog computing, and real-time data processing.	
8	Midterm Exam	
9	Big data technologies, data analytics, and decision support systems.	
10	Blockchain technology, smart contracts, and their use cases.	
11	Digital twins, simulation, and smart manufacturing systems.	
12	Augmented reality, virtual reality, and mixed reality applications.	
13	Robotic systems, autonomous vehicles, and unmanned systems.	
14	Cybersecurity, data privacy, and artificial intelligence ethics in next-generation technologies.	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
ING-101	English I	2.0	0.0	0.0	2.0	2.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Yabancı Diller Yüksekokulu Yönetim Kurulunca uygun görülen öğretim elemanları						
Course Assistants							
Course Aims	The Common European Framework A1-A2 Skills						
Course Goals							
Course Contents	Present continuous tense; present tense; verbal, reading, writing and listening skills in these times; verbal skills (introducing yourself, describing something / place, giving directions, question and answer patterns for personal information); reading skills (reading lists / labels in restaurants, buses, trains, etc., shopping places, asking questions, etc.); writing skills (text message, poster content, form filling); listening skills (directions, place / person description etc.).						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	100						
Specialized Field Course	0						
Supportive Course	20						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	80						
COURSE OUTCOMES							
C01	Students can understand basic grammar structures at A1 and A2 levels.						
C02	Students can answer grammar questions and create written expressions by using these grammar structures at A1 and A2 levels correctly.						
C03	Students learn basic words used in daily life at A1 and A2 levels.						
C04	Students can use these words at A1 and A2 levels correctly in sentences and have meaningful conversations.						
C05	Students can understand short and simple texts at A1 and A2 levels, and correctly extract the main idea and important details of the text.						
C06	Students can understand the general meaning of the text by using context clues to understand new words in A1 and A2 level texts and correctly answer questions based on the text.						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	100	Course Duration (Excluding Exam Week)	14	4	56	
Quiz	0	0	Time Of Studying Out Of Class	14	4	56	
Homework	0	0	Homeworks	0	0	0	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	
Workshop	0	0	Visas	1	8	8	
Seminary	0	0	Finals	1	8	8	

Field study	0	0	Workload Hour (30)	0
TOTAL	100		Total Work Charge / Hour	128
The ratio of the term to success	40		Course's ECTS Credit	2
The ratio of final to success	60			
TOTAL	100			

Recommended or Required Reading

Textbook	CAMBRIDGE LMS TOUCHSTONE
Additional Resources	CAMBRIDGE LMS TOUCHSTONE

Material Sharing

Documents	CAMBRIDGE LMS TOUCHSTONE
Assignments	
Exams	midterm and final exam vize ve final sınavı
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	1
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	1
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	1
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	1
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	1
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	1
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	1
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	2
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	2
13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	2
15		2

Course Content

Week	Topics	Study Materials
1	Grammar: Saying Hello and Goodbye; The verb be: I, you, and we - Telling Your Name Conversation Strategies: Talking about Personal information; Everyday expressions	Cambridge LMS/Touchstone
2	Grammar:The verb be: he, she, and they-This and these-Noun plurals Conversation Strategies:How about you?	Cambridge LMS/Touchstone

Contribution
1
1
1
1
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1
1
1
1
2
2
2
2
2
2

3	Grammar:Be in statements Possessive adjectives Yes-No questions with be Negatives statements with be Conversation Strategies: Showing interest Really?	Cambridge LMS/Touchstone
4	Grammar:Simple present statements Simple present Yes-No questions and short answers Conversation Strategies:Saying more than yes or no Well . . .	Cambridge LMS/Touchstone
5	Grammar:Simple present information questions/ Frequency adverbs Conversation Strategies:Asking questions in two ways- I mean	Cambridge LMS/Touchstone
6	Grammar:There's and There are Quantifiers Adjectives before nouns Asking questions about time Conversation Strategies:Me too and Me neither/Right and I know	Cambridge LMS/Touchstone
7	REVISION OF 1-6 UNITS	Cambridge LMS/Touchstone
8	Grammar:Present continuous statements /Present continuous questions Conversation Strategies: Asking follow-up questions/ That's . . .	Cambridge LMS/Touchstone
9	Grammar: How much . . . ? How much . . . ? with this and these How much . . . ? with that and those Conversation Strategies:Taking time to think/"Conversation sounds"	Cambridge LMS/Touchstone
10	Grammar:Can and can't for possibility Conversation Strategies:Explaining words/ Like	Cambridge LMS/Touchstone
11	Grammar: Simple past statements – regular verbs Simple past statements – irregular verbs Conversation Strategies:Appropriate responses/You did?	Cambridge LMS/Touchstone
12	Grammar:Simple past of be Simple past information questions Conversation Strategies: Answer a question; then ask a similar one/ Anyway	Cambridge LMS/Touchstone
13	Grammar:Countable and uncountable nouns How many . . . ? How much . . . ? Conversation Strategies:or something and or anything/ or . . . ?	Cambridge LMS/Touchstone
14	REVISION OF 7-12 UNITS	Cambridge LMS/Touchstone

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
MAT-3000	General Mathematics	2.0	0.0	1.0	2.5	3.0	1st Semester
Course Information							
Language of Instruction	Turkish						
Type of Course Unit	Required						
Course Instructors	Öğr.Gör.Hüseyin GÜLLÜ						
Course Assistants	Matematik Bölümü araştırma görevlileri						
Course Aims	It is aimed to introduce the mathematical tools that enable students to understand some theories in technical and social sciences better and to use the mathematical tools in solving problems of students in the students who are the complementary of each other.						
Course Goals	To teach the concepts of cluster and number To teach the function and some special functions To be able to solve equations and inequalities in the first and second order. Presentation of polynomial and rational functions						
Course Contents	Fundamentals of arithmetic, Graphs, Functions and Models, Second Order Functions, Equations and Inequalities, Polynomial and Rational Functions.						
Prerequisites and Co-requisites Courses							
Course Learnin-Teaching Method	Lecture & In-Class Activities Group Work Assignment (Homework)						
Level of Course Unit	5						
Course Category (GENERAL)	Contribution Level (%)						
Basic Professional Course	0						
Specialized Field Course	0						
Supportive Course	0						
Skill, Communication, and Administration Skills Course	0						
Transferable Skills Course	0						
COURSE OUTCOMES							
C01	Basic topics in arithmetic, solving equations, rational expressions, radicals and rational powers.						
C02	To find the solution sets of first order equations and inequalities with one unknown.						
C03	To find the solution sets of first order equations and inequalities involving absolute value.						
C04	Solving equations involving exponential expressions. Solving equations involving rooted expressions.						
C05	Factorization and identities						
C06	Ratio and Proportion						
C07	To study problems involving periodically recurring situations in real life.						
C08	Functions and Graphics						
Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)				
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total	
Visa	1	40	Course Duration (Excluding Exam Week)	14	3	42	
Quiz	0	0	Time Of Studying Out Of Class	14	1	14	
Homework	0	0	Homeworks	7	3	21	
Attendance	0	0	Presentation	0	0	0	
Application	0	0	Project	0	0	0	
Lab	0	0	Lab Study	0	0	0	
Project	0	0	Field Study	0	0	0	

Workshop	0	0	Visas	1	10	10
Seminary	0	0	Finals	1	15	15
Field study	0	0	Workload Hour (30)	0		
TOTAL	40		Total Work Charge / Hour	102		
The ratio of the term to success	40		Course's ECTS Credit	3		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	Ders notları öğretim elemanı tarafından derste verilmektedir.
Additional Resources	Ders notları öğretim elemanı tarafından derste verilmektedir.

Material Sharing

Documents	Ders notları öğretim elemanı tarafından derste verilmektedir.
Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	
3	Follows and effectively uses current developments and practices in the profession.	
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	
8	Has awareness of career management and lifelong learning.	
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	
10	Follows information in the field and communicates with colleagues using a foreign language.	
11	Explains medical terminology and health data standards.	
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	
13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1	Basic topics in arithmetic, solving equations, rational expressions, radicals and rational powers.	
2	Basic topics in arithmetic, solving equations, rational expressions, radicals and rational powers.	
3	To find the solution sets of first order equations and inequalities with one unknown.	
4	To find the solution sets of first order equations and inequalities with one unknown.	

5	To find the solution sets of first order equations and inequalities with one unknown.	
6	To find the solution sets of first order equations and inequalities with one unknown.	
7	Solving equations involving exponential expressions. Solving equations involving rooted expressions.	
8	Solving equations involving exponential expressions. Solving equations involving rooted expressions.	
9	Factorization and identities	
10	Ratio - Proportion and Set Theory	
11	To study problems involving periodically recurring situations in real life.	
12	To study problems involving periodically recurring situations in real life.	
13	Functions and Graphics	
14	Second-degree equations and polynomials	

Programme							
Uluborlu Selahattin Karasoy Vocational School Health Information System Technics							
Course Information							
Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
MYO-3003	Graduation project	0.0	0.0	2.0	1.0	2.0	3rd Semester

Course Information	
Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	Dr. Öğr. Üyesi Birkan BÜYÜKARIKAN
Course Assistants	-
Course Aims	It aims to guide students to design, develop and successfully complete a project using the knowledge and skills they have gained in the field of computer technologies. It also develops students' basic competencies such as problem solving, creative thinking, teamwork and project management.
Course Goals	1) To teach feasibility study, 2) Developing project idea, 3) To teach the project process, 3) Participate in team work 4) To learn team work discipline and system, 5) To ensure that the prepared project is aware of existing projects, 6) To be able to report the prepared works, 7) To teach presentation and presentation.
Course Contents	Determining the project idea and developing preliminary assumptions, Literature scanning techniques and adapting the information to the project, Applying the technical knowledge and skills gained in the department in software or hardware projects, Carrying out the project as an individual or group work and process management, Effectively expressing the project results with written and oral presentation techniques.
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	Project Work Report Writing Problem solving Individual Study
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	50
Specialized Field Course	30
Supportive Course	0
Skill, Communication, and Administration Skills Course	20
Transferable Skills Course	0

COURSE OUTCOMES

CO1	Can define a project and develop preliminary assumptions
CO2	Has knowledge of current technologies and approaches by conducting a literature review
CO3	Develops software or hardware projects using technical knowledge and skills acquired within the scope of the department
CO4	Plans and executes the project within the scope of individual or group work
CO5	Expresses the project in written and verbal form

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa	1	50	Course Duration (Excluding Exam Week)	14	2	28
Quiz	0	0	Time Of Studying Out Of Class	12	1	12
Homework	0	0	Homeworks	0	0	0
Attendance	0	0	Presentation	1	5	5
Application	0	0	Project	1	14	14
Lab	0	0	Lab Study	0	0	0

Project	1	50	Field Study	0	0	0
Workshop	0	0	Visas	1	5	5
Seminary	0	0	Finals	1	5	5
Field study	0	0	Workload Hour (30)	0		
TOTAL	100		Total Work Charge / Hour	69		
The ratio of the term to success	40		Course's ECTS Credit	2		
The ratio of final to success	60					
TOTAL	100					

Recommended or Required Reading

Textbook	-
Additional Resources	-

Material Sharing

Documents	-
Assignments	-
Exams	-
Additional Material	-

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

Work Placements

As with any other educational component, credits for work placements are only awarded when the learning outcomes have been achieved and assessed. If a work placement is part of organised mobility (such as Farabi and Erasmus), the Learning Agreement for the placement should indicate the number of credits to be awarded if the expected learning outcomes are achieved.

Program Learning Outcomes

No	Course's Contribution to Program	Contribution
1	Has fundamental, up-to-date, and practical knowledge related to the profession.	3
2	Possesses knowledge about occupational health and safety, environmental awareness, and quality processes.	1
3	Follows and effectively uses current developments and practices in the profession.	3
4	Effectively uses information technologies (software, programs, animation, etc.) related to the profession.	3
5	Has the ability to independently evaluate and propose solutions to professional problems and issues with an analytical and critical approach.	3
6	Can effectively present thoughts and information both in written and oral communication at the level of knowledge and skills, and express them clearly.	2
7	Takes responsibility as a team member to solve complex and unforeseen problems encountered in field applications.	4
8	Has awareness of career management and lifelong learning.	1
9	Possesses social, scientific, cultural, and ethical values in the stages of collecting, implementing, and disseminating data related to the field.	2
10	Follows information in the field and communicates with colleagues using a foreign language.	1
11	Explains medical terminology and health data standards.	2
12	Uses, manages, controls, and maintains health information systems, automation, and databases.	2
13	Performs integration of health information systems in healthcare institutions.	2
14	Designs and develops software interfaces, graphics, and visual elements.	1
15		

Course Content

Week	Topics	Study Materials
1	Determining the project topic and establishing its scope	
2	Creating the necessary pre-assumptions for the project and feasibility studies	
3	Conducting a literature review, gathering information on current studies and technologies	
4	Conducting a literature review, gathering information on current studies and technologies	

5	Developing the project idea and defining technical details	
6	Project design, selecting tools and methods	
7	Implementation and construction phase of the project	
8	Implementation and construction phase of the project	
9	Implementation and construction phase of the project	
10	Implementation and construction phase of the project	
11	Identification of deficiencies in the project and improvement studies	
12	Identification of deficiencies in the project and improvement studies	
13	Feasibility tests and arrangements of the project	
14	Writing the project report, preparation of visuals and presentation tools	

Programme

Uluborlu Selahattin Karasoy Vocational School Health Information System Technics

Course Information

Course Unit Code	Course Unit Title	Credit Theoretic	Credit Pratic	Credit Lab.	Credit Total	Credit Ects	Semester
UOS-3000	University Common Elective I	2.0	0.0	0.0	2.0	3.0	3rd Semester

Course Information

Language of Instruction	Turkish
Type of Course Unit	Required
Course Instructors	
Course Assistants	
Course Aims	
Course Goals	
Course Contents	
Prerequisites and Co-requisites Courses	
Course Learnin-Teaching Method	
Level of Course Unit	5
Course Category (GENERAL)	Contribution Level (%)
Basic Professional Course	
Specialized Field Course	
Supportive Course	
Skill, Communication, and Administration Skills Course	
Transferable Skills Course	

COURSE OUTCOMES

Assessment Methods and Criteria			ECTS / Table Of Workload (Number of ECTS credits allocated)			
Studies During Halfterm	Number	Co-Efficient	Activity	Number	Duration	Total
Visa			Course Duration (Excluding Exam Week)			
Quiz			Time Of Studying Out Of Class			
Homework			Homeworks			
Attendance			Presentation			
Application			Project			
Lab			Lab Study			
Project			Field Study			
Workshop			Visas			
Seminary			Finals			
Field study			Workload Hour (30)			
TOTAL			Total Work Charge / Hour			
The ratio of the term to success			Course's ECTS Credit			
The ratio of final to success						
TOTAL						

Recommended or Required Reading

Textbook	
Additional Resources	

Material Sharing

Documents	
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Assignments	
Exams	
Additional Material	

Planned Learning Activities and Teaching Methods

Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)

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13	Performs integration of health information systems in healthcare institutions.	
14	Designs and develops software interfaces, graphics, and visual elements.	
15		

Course Content

Week	Topics	Study Materials
1		
2		
3		
4		
5		
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13		
14		