CENG 101 – Algorithms and Programming with Java-I Syllabus FALL 2020

Course Description: This is an introductory course for the fundamentals of computers, introduction topics to computer engineering and programming with Java. This course includes items such as computer organization and peripherals, binary number system, logic gates and adders, flip-flop and registers, main and secondary storage devices. The course also covers the fundamentals of algorithmic problem solving techniques by using basic control and data structures. Other topics include fundamental data types, control structures including conditions and iteration, arrays, input and output.

Course Objectives: To understand computing and computer programming

- To understand fundamentals of a computer and programming topics,
- To develop basic computational thinking skills, i.e., algorithmic thinking
- To get familiar with fundamental concepts and terminology in computer programming
- To be able to use an integrated development environment to design and write code in the Java programming language.
- To define and correctly use data types, decision structures, arrays, conditionals and loops.
- To understand the use of predefined classes and objects.

Textbook: (main) Big Java: Late Objects, by Cay Horstman, John Wiley & Sons Inc., ISBN: 978-1-118-08788-6 (optional) Java Software Solutions: Foundations of Program Design, Lewis & Loftus, 8th Edition, Pearson.

Instructors:

Dr. Hakan Çağlar Dr. Yüksel Arslan

Teaching Assistant:

R.A. Merve Işıl Peten

Grading:

Midterm exam(including quizzes if done): 30%

• Lab grade: **30%** (as explained in the final part)

• Final exam: 40%

Website: (TBD) http://moodle.ankarabilim.edu.tr/

Important Note for Online/hybrid education:

- i. In case of online or hybrid education, course/lab scheduled periods are same,
- ii. Each student will be informed with the application and the exams,
- iii. Regulations will be the same as of the regulations of the university.
- iv. Implementation of the labs will be declared specifically.

Weekly Schedule

Week	Course Subject	Lab Topics
	Introduction to Comp. Eng.:	·
1	Fundamental concepts of Computer science, Boolean	-
	operations, gates, flip-flops, Main /Secondary memory	
	Bit patterns and representing Information, Binary numbers	
2	& representation, CPU and CPU Instructions, Assembly	-
	and Machine Lang.	
	Ch-1 : Introduction:	Lab. Work-1
	Computer Programs, The Anatomy of a Computer	Topics are same with same week's
3	The Java Programming Language, Becoming Familiar with	subject
3	Your Programming Environment, Analyzing Your First	,
	Program, Errors, Problem Solving: Algorithm Design	
	Computer Programs, The Anatomy of a Computer	Lab. Work-2
4	The Java Programming Language, Becoming Familiar with	Topics are same with same week's
	Your Programming Environment, Analyzing Your First	subject
	Program, Errors, Problem Solving: Algorithm Design	Lab Marila 2
	Ch.2: Fundamental Data Types	Lab. Work-3
5	Variables, Arithmetic, Input and Output, Problem Solving:	• Topics are same with same week's subject
	First Do It By Hand, Strings	
	Variables, Arithmetic, Input and Output, Problem Solving:	Lab. Work-4
6	First Do It By Hand, Strings	• Topics are same with same week's subject
	Ch.3: Decisions	
	The if Statement, Comparing Numbers and Strings, Multiple	
7	Alternatives, Nested Branches, Problem Solving:	Lab exam1
	Flowcharts, Problem Solving: Test Cases, Boolean Variables	(Date is TBD)
	and Operators, Application: Input Validation	
	MIDTERM EXAM	
	The if Statement, Comparing Numbers and Strings, Multiple	Lab. Work-5
8	Alternatives, Nested Branches, Problem Solving:	Topics are same with same week's subject
	Flowcharts, Problem Solving: Test Cases, Boolean Variables	
	and Operators, Application: Input Validation	
	Ch.4: Loops	Lab. Work-6
	The while Loop, Problem Solving: Hand-Tracing, The for	Topics are same with same week's subject
9	Loop, The do Loop, Processing Sentinel Values, Problem	
	Solving: Storyboards, Common Loop Algorithms, Nested	
	Loops,Random Numbers and Simulations	
	The while Loop, Problem Solving: Hand-Tracing, The for	Lab. Work-7
10	Loop, The do Loop, Processing Sentinel Values, Problem	Topics are same with same week's subject
	Solving: Storyboards, Common Loop Algorithms, Nested	
	Loops,Random Numbers and Simulations	
	Ch.5: Methods	
	Methods, Implementing Methods, Parameter Passing,	Lab exam2
11	Return Values, Methods Without Return Values, Reusable	(Date is TBD)
	Methods, Stepwise Refinement, Variable Scope, Recursive	<u>'</u>
	Methods	

	Methods, Implementing Methods, Parameter Passing,	Lab. Work-8
12	Return Values, Methods Without Return Values, Reusable	Topics are same with same week's subject
12	Methods, Stepwise Refinement, Variable Scope, Recursive	
	Methods	
	Ch.6: Arrays and Array Lists	Lab. Work-9
	Arrays, The Enhanced for Loop, Common Array Algorithms,	Topics are same with same week's subject
13	Using Arrays with Methods, Adapting Algorithms,	
	Discovering Algorithms by Manipulating	
	Physical Objects, Two-Dimensional Arrays, Array Lists	
14	Two Dimensional Arrays, Array Lists, Common Algorithms	Lab exam3
14	for processing Array & Array Lists	(Date is TBD)
	FINAL EXAM	

Note: 1. Syllabus is likely to change based upon the actual progress of the course!

2. Each lab or most of the Lab.Works will contain <u>lab assignments</u>, and the average of these assignments will be considered as 1 lab exam and taken into consideration as stated in the evaluation part.

Course schedule:

Section 1 : Monday 10:40 – 12:30, Cl1	Section 2 : Monday 10:40 – 12:30, Cl1
Tuesday 12:40 – 13:30, Cl1	Tuesday 12:40 – 13:30, Cl2
Sec-1 Lab: Thursday, 10:40 – 12:30, CENG Lab.	Sec-2 Lab: Thursday, 10:40 – 12:30, CENG Lab.

Laboratory Policy

- All students are required to attend 80% of the lab assignments.
- Students cannot participate to lab assignments in another section.
- An attendance sheet will be signed by each student in the lab by showing the ID card. Each student is required to bring his/her ID card. A student who did not sign the sheet will be regarded as not attended and will be graded 0 for the laboratory.
- In lab assignment, if there is no submission, you will be regarded as not attended.
- If you miss an assignment because of a valid reason, it is important to contact your teaching assistant immediately. You are required to present the relevant documentation in one week after the assignment date.
- Lab assignments will be evaluated automatically by VPL and VPL grade is final except cheating occurrences.
- If we detect any form of plagiarism, all plagiarized assignment owners receive 0 and we report it to the disciplinary board of the university.
- After writing your code, make sure that there is no compilation error. Submissions with compile errors will result in a grade of 0.
- Each student should be able to submit a working code and get a non-zero grade.
- Objections to lab grades will only be accepted if the student has a non-zero grade.

Evaluation of Lab grade:

Average all Lab exercises (approx. 8 for this semester) will be evaluated as one grade + 4 Lab exams form the grade, which is (Lab Exam 1+ Lab Exam 2+ Lab Exam 3+ Ave. of Lab assignments) / 4 = Lab Grade

CENG 102 – Algorithms and Programming with Java-II Syllabus SPRING 2021

Department: Computer Engineering

Credits: Ankara Science University, (3+4) Credits 5, Credits, ECTS 8

Course Coordinator: Dr.Cevdet Dengi, Dr.Yüksel Arslan,

Semester: 2020-21 Spring

Course Hours: 3 hours of lecture & 4 hours of Lab. per week

Course Description: Material Covered the Algorithms and Programming with Java II course (Java II) is the continuation of the Algorithms and Programming with Java I course (Java I). We assume, students have successfully taken and passed the Java I course. The Java II course will continue to explore the Java language and fundamentals, and gives you an opportunity to put the basic computer literacy, design and programming skills to solve real problems of mathematics, modeling, and computation. Implementation of classes, inheritance, interfaces, methodology for object oriented design and development. Graphical user interfaces design, (buttons, text components, drawing exc.). Input/output files reading and writing and exception handling, recursion, searching and sorting algorithms. Java Collections Frameworks will be presented from the perspective of a library use. Student will get weekly 4 hours of Lab experiments and many small projects, and home works. The ultimate goal is to produce a commercial-quality program, which is well structured, documented, bug-free and easy to use. Students will be expected to display creativity and an ability to learn independently.

Course Objectives:

- To continue learning the Java language and understand more advanced features and semantics of the Java programming
- Proficient programming in the Java language and analyze, design, development, and debugging techniques appropriate for the Java
- To understand the concepts of classes, objects, and encapsulation
- To apply object-oriented design techniques for building complex programs in a systematic manner.
- To become familiar with common user-interface components and apply them to real world problems
- To understand several sorting and searching algorithms, and estimate and compare the performance of different algorithms

Textbook: (main) Big Java: Late Objects, by Cay Horstman, John Wiley & Sons Inc., ISBN: 978-1-118-08788-6

(optional) Java Software Solutions: Foundations of Program Design, Lewis & Loftus, 8th Edition, Pearson.

Instructors:

Teaching Assistant:

R.A. Ömer Çağrı Dala R.A. Merve Işıl Peten

Grading:

• Midterm exam: 25%

• Lab grade: **35%** (7 assignments and 5 lab exams)

• Final exam: **40%**

Website: (TBD) http://moodle.ankarabilim.edu.tr/

Weekly Schedule

Week	Course Subject	Lab Topics
	Ch.8 Objects and Classes	
1	To understand the concepts of classes, objects, and encapsulation. The public interface of a class, implementing instance method, constructors. To be able to design, implement and test your own classes. Static variables and static methods.	Lab. topics are same with week's subject (Perhaps omitted!)
2	Ch.8 Objects and Classes Week 1 continuous	Lab. topics are same with week's subject Lab Assignments -1
3	Ch.9 Inheritance & Interface Inheritance and inheritance hierarchies, implementation of subclasses that inherit and override superclass methods, the concept of polymorphism. Common superclass Object and its methods and working with interface types	Lab. topics are same with week's subject
4	Ch.9 Inheritance & Interface Week 3 continuous	Lab. topics are same with week's subject Lab Assignments 2
5	Ch.12 Object Oriented Design Inheritance, aggregation, and dependency relationships between classes using UML class diagrams. Object oriented design techniques to building complex programs. Package usage to organize programs	Lab. topics are same with week's subject Lab Exam -1
6	Ch.10 Graphical User Interfaces Implementation of basic graphical user interfaces, buttons, text fields, and other components to a frame window, handle events that are generated by buttons. Programming that display simple drawings.	Lab. topics are same with week's subject Lab Assignments - 3
7	Ch.11 Advanced User Interfaces Layout managers to arrange user-interface components in a container. Common user-interface components, such as radio buttons, check boxes, and menus. events handling generated by user-interface components. Effective Java documentation.	Lab. topics are same with week's subject Lab Exam -2

8	MIDTERM EXAM	
	Ch.7 Input/output and Exception Handling	Lab. topics are same with week's
9	Read and Write text files, text input and output. Process command line arguments. Exception handling, throwing and catching exceptions, some examples and programming tips. Implementation programs that propagate checked exceptions and handling input errors.	subject Lab Assignments 4
	Ch.7 Input/Output and Exception Handling	Lab. topics are same with week's subject
10	Week 9 continue.	Lab Exam -3
	Ch.13 Recursion	Lab. topics are same with week's subject
11	The relationship between recursion and iteration, Use recursive helper methods. When the use of recursion affects the efficiency of an algorithm, efficiency of algorithm. Analyze problems much easier to solve by recursion. Recursive structures using mutual recursion	Lab Assignments- 5
	Ch.14 Sorting & Searching	
12	Several sorting and searching algorithms and their performance evaluations. Analyzing the performance of the selection sort algorithm, analyzing the merge sort algorithm. To estimate and compare the performance of algorithms. Estimating the running time of an algorithm. Sorting and Searching in the Java Library	Lab. topics are same with week's subject Lab Exam -4
	Ch.14 Sorting & Searching	Lab. topics are same with week's
13	Week 12 continuous	subject
		Lab Assignments 6
	Ch.15 The Java Collections Framework	Lab. topics are same with week's subject
14	Overview of the collection framework and the collection classes supplied in the Java library. Linked lists, sets, maps implementation. To choose appropriate collections for solving programming problems. To study applications of stacks and queues	Lab Assignments 7
_	Ch.15 The Java Collections Framework	Lab. topics are same with week's subject
15	Week 14 continuous	Subject
		Lab Exam -5
16-17	FINAL EXAM	

Note: 1. Syllabus is likely to change based upon the actual progress of the course!

Course schedule:

Course hours: xxxx

Lab hours: xxxx

Type of Course: Laboratory Work - Lecture

Course Material: Multimedia - PC - Written

Teaching Methods: Lecture (if needed on line teaching)

COURSE INFORMATION

Course Name	Code	Semeste	Theory	Application	Laboratory	Nationa	ECT	
		r	(hours/week	(hours/week	(hours/week	1	S	
)))	Credit		
Principles of	HIS	Fall	2	0	0	2	2	
Ataturk and	101/							
History of	501							
Revolutions I								
Prerequisites	None	•		•	•			
Course	English							
Language								
Course Type	Compulse	ory						
Mode of	Face to fa	ace/Distance	e Learning/Hybr	id				
Delivery (face to								
face, distance								
learning)								
Learning and	Lecturing	g, discussion	and submission					
teaching								
strategies								
Instructor (s)	Merve Ko	Merve Konak						
Course objective	To teach	To teach students the recent history of Turkey, developing awareness of democracy						
Course Content	The Worl	d and the O	ttoman Empire	at the beginning	of the 20th cen	tury, the re	asons	
	for the co	for the collapse of the Ottoman Empire, Constitutional period, Trablusgarp and the						
	Balkan W	Balkan Wars, I. World War, Preparation period of the Independence War,						
	Congress	es, opening	of TBMM, facac	les, The Lausanr	ne Peace Treaty			
References	1. A	tatürk İlkele	eri ve İnkılâp Tar	ihi, Okutman Ya	y., Ankara,2011			
	2. F	atma Acun	(ed.), Atatürk ve	Türk İnkılâp Tar	ihi, Siyasal Kitab	evi, Ankara	١,	
		016			_			
	3. Halil İnalcık, Atatürk ve Demokratik Türkiye , Kırmızı Yay., İstanbul, 2007							
	4. İlber Ortaylı, Türkiye'nin Yakın Tarihi, Timaş Yay., İstanbul,2012							
			ATÜRK, Nutuk, A					
					nüze Türkiye Cuı	mhuriyeti T	arihi,	
	Siyasal Kitabevi, 7.Baskı, Ankara,2009							
	7. Oral Sander, Siyasi Tarih , İmge Kitabevi, Ankara, 2011							
Learning		•	se students will	•				
outcomes			•	•	d from the begin	•		
			dernization to t	he declaration o	f the Republic in	a cause-ef	tect	
		elationship.						
		2. Knows under what conditions and how the National Struggle was won.						
	3. Connects the present and the past of our country.4. Has the ability to make inferences on national and universal issues.							
	4. F	ias the abilit	ty to make infere	ences on nation	ai and universal	issues.		

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	To give information about the subject, purpose and content of Atatürk's Principles and History of Revolution. General concepts in the science of history.
2. Week	Internal and external causes of the collapse of the Ottoman Empire, 3. Selim and II. Mahmut Periods.
3. Week	The measures taken by the Ottoman Empire to prevent its bad course. Innovation movements
4. Week	Social, political and economic situation of the Ottoman Empire in the early 20th century, Trablusgarp and Balkan Wars
5. Week	World War I causes, process and consequences
6. Week	Implementation of the Mondros Armistice, occupation of Anatolia
7. Week	Mid- term exam
8. Week	Activities of Mustafa Kemal Atatürk and his transition to Anatolia
9. Week	Preparation period for national struggle and congresses, The occupation of Istanbul
10. Week	Opening of 'TBMM' in Ankara, laws and activities
11. Week	Sevres Peace Treaty, Developments in the Southern Front and Eastern Front
12. Week	Establishment of the Regular Army, Developments in the Western Front
13. Week	Sakarya War and Developments after the Sakarya war
14. Week	Great Offensive war, the signing of the Mudanya Armistice
15. Week	Lausanne Peace Treaty, Abolition of the Sultanate The proclamation of the republic
16. Week	Final Exam

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	14	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	0	%0
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%40
Final Exam	1	%60
Total	16	%100
Contribution of semester Works to success points	15	%40
Contribution of final exam to success points	1	%60
Total	16	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	2	28
Weekly Tutorial Hours			
Reading Tasks	4	1	4
Studies	4	1	4
Material Design and Implementation			
Report Preparing	2	1	2
Preparing a Presentation	2	1	2
Presentations			
Midterm Exam and Preperation for Midterm	1	2	2
Exam			
Final Exam (Study duration)	1	2	2
Total Workload			44
Total Workload/30 hours		•	
ECTS			2

COURSE INFORMATION

Course Name	Code	Semester	Theory (Hours / Week)	Application (Hours/ Week)	Laboratory (Hours/ Week)	National Credit	EC TS
Principles of Ataturk and History of Revolutions II	HIS 102/ 502	Spring	2	0	0	2	2
Prerequisites	None						
Course Language	English						
Course Type	Compuls	ory					
Mode of Delivery (face to face, distance learning)		Learning/Hyb					
Learning and teaching strategies		Lecturing, discussion and submission.					
Instructor (s)		Merve Konak					
Course objective	To teach	To teach students the recent history of Turkey, developing awareness of democracy.					
Course Content	Abolishment of Sultanate, Declaration of the Republic, Abolition of the Caliphate, Turkish Domestic Policy in the Atatürk Era, Atatürk's Revolutions, Period of Atatürk Turkey's Foreign Policy, II. World War, Atatürk's principles, After 1938.						
References	 Atatürk İlkeleri ve İnkılâp Tarihi, Okutman Yay., Ankara,2011 Fatma Acun (ed.), Atatürk ve Türk İnkılâp Tarihi, Siyasal Kitabevi, Ankara, 2016 Halil İnalcık, Atatürk ve Demokratik Türkiye, Kırmızı Yay., İstanbul, 2007 İlber Ortaylı, Türkiye'nin Yakın Tarihi, Timaş Yay., İstanbul,2012 M. Kemal ATATÜRK, Nutuk, Alfa Yay.,2017 Temuçin Faik Ertan(ed.), Başlangıçtan Günümüze Türkiye Cumhuriyeti Tarihi, Siyasal Kitabevi, 7.Baskı, Ankara,2009 						
Learning outcomes	 Oral Sander, Siyasi Tarih, İmge Kitabevi, Ankara, 2011 After taking this course students will be able to; Understands the political events in the period from the proclamation of the Republic to the present day in a cause-effect relationship. Knows the development line of Turkish democracy history Knows the texts of the Turkish Constitution in general terms. Knows the causes and results of the Second World War. Knows Atatürk's principles and the reforms. 						

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	Abolishment of Sultanate, Declaration of the Republic, Abolition of the Caliphate,
2. Week	Terakkiperver Cumhuriyet Party, Şeyh Said Rebellion, İzmir assassination, Serbest Cumhuriyet Party, Menemen Event.
3. Week	Revolutions and regulations in Law, Education and Culture.
4. Week	Revolutions and regulations in the Economic and Daily life.
5. Week	The 1923-1930 period the Republic of Turkey: Turkish-Greek relations, Mosul problem, Turkish-French relations.
6. Week	The 1923-1930 period the Republic of Turkey: Turkish-Italian relations, Turkish-Soviet relations, relations with Eastern states.
7. Week	The 1931-1939 period the Republic of Turkey: Turkey's entry into the League of Nations, the German-Turkish relations, the Balkan Pact, the Turkish-British relations.
8. Week	Mid- term exam
9. Week	The 1931-1939 period the Republic of Turkey: Montreux Straits Convention, Sadabad Pact, Hatay problem.
10. Week	Atatürk's Principles: Republicanism, Populism, Nationalism.
11. Week	Atatürk's principles: Statism, Secularism, Revolution.
12. Week	İsmet İnönü Period (1938-1950): II. World War.
13. Week	Demokrat Party Period (1950-1960).
14. Week	Domestic and foreign policy of the Republic of Turkey between the years 1960-1990.
15. Week	Turkey during and after the Cold War era.
16. Week	Final Exam

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	14	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	0	%0
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%40
Final Exam	1	%60
Total	16	%100
Contribution of semester Works to success points	15	%40
Contribution of final exam to success points	1	%60
Total	16	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	2	28
Weekly Tutorial Hours			
Reading Tasks	4	1	4
Studies	4	1	4
Material Design and Implementation			
Report Preparing	2	1	2
Preparing a Presentation	2	1	2
Presentations			
Midterm Exam and Preperation for Midterm	1	2	2
Exam			
Final Exam (Study duration)	1	2	2
Total Workload			44
Total Workload/30 hours			
ECTS			2

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS		
Physics II	PHY 102	Fall	3	0	2	4	6		
Prerequisites									
Course Language	English								
Course Type	Compuls								
Mode of	Face to fa	ace/Distance	Learning/Hybrid						
Learning and teaching strategies	Lecturing	Lecturing, discussion and submission.							
Instructor (s)	Dr. Nesli	Dr. Neslihan GÖKÇEK							
Course objective	electricit	Upon the successful completion of this course, students will establish the relationship between electricity, magnetism and engineering. This includes to provide students the concepts of electricity and magnetism with defining and solving problems.							
Course Content	Basic con		tricity and magne	tism such as circu		Faraday's La	aw,		
References	1. R. A. S (2007). 2. H. D.	1. R. A. Serway & J. W. Jewett, Physics for Scientists and Engineers (7th Ed.), Brooks Cole							
Learning outcomes	1. Learn the basic concepts of mechanics, kinetics and dynamics 2. Apply the topics of mechanics to their own engineering science 3. Improve the ability of student's solution perspective for different kinds of new problems 4. Modelling a new problem related with the concepts of mechanics and interpret the results 5. Enabling interactive thinking with other fields of sciences such as electric and electronics engineering								

Form IVb (English): Subjects by weeks

	Weeks	Subjects
1.	Week	Electric fields
2.	Week	Gauss's law
3.	Week	Electric potential
4.	Week	Capacitance and dielectrics
5.	Week	Current and resistance
6.	Week	Direct current circuits
7.	Week	Midterm Exam
8.	Week	Magnetic fields
9.	Week	Sources of magnetic fields
10.	Week	Faraday's law
11.	Week	Inductance
12.	Week	Alternating current circuits
13.	Week	Recitation and Practice

Form Vb (İngilizce): Assessment Method

1	Contribution
14	%10
6	%20
0	%0
0	%0
0	%0
0	%0
0	%0
0	%0
0	%0
1	%30
1	%40
21	%100
20	%50
1	%40
20	%100
	6 0 0 0 0 0 0 0 0 1 1 21 20

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	3	42
Laboratory	14	2	28
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary work,	18	5	90
reinforcement, preparation for the exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment			
Midterms (Study duration)	1	8	8
Final Exam (Study duration)	1	12	12
Total Workload			180
Total Workload/30 hours			6.00
ECTS			6.00

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Course Outcomes				
	1	2	3	4	5
1	X	X	X	X	X
2		X	X	X	
3			X	X	
4				X	
5		X		X	
6					
7					
8					
9					
10					
11					

1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
Physics I	PHY 101	Fall	3	0	2	4	6
Prerequisites							
Course Language	English						
Course Type	Compuls	ory					
Mode of	Face to fa	ace/Distance	Learning/Hybrid				
Learning and teaching strategies	Lecturing	Lecturing, discussion and submission.					
Instructor (s)		han GÖKÇE					
Course objective	mechanic	Upon the successful completion of this course, students will establish the relationship between mechanics and engineering. This includes to provide students the concepts of mechanics with defining and solving problems.					
Course Content	Basic inf	Basic information about the concepts of nature of matter, mechanics, kinetics and dynamics					
References	 R. A. Serway & J. W. Jewett, Physics for Scientists and Engineers (7th Ed.), Brooks Cole (2007). H. D. Young and R. A. Freedman, University Physics 12th-14th Ed. Pearson (2008, 2016). Principles of Physics by Halliday, Resnick, and Walker (10th Edition), John Wiley (2014) 						
Learning				s, kinetics and dy			
outcomes				r own engineering			
	4. Model	ling a new pr		h the concepts of	r different kinds of mechanics and int		

Form IVb (English): Subjects by weeks

	Subjects	
1.	Week	Physics and measurement
2.	Week	Motion in one dimension
3.	Week	Vectors
4.	Week	Motion in two dimensions
5.	Week	The laws of motion
6.	Week	Circular motion and other applications of Newton's laws
7.	Week	Midterm Exam
8.	Week	Energy and energy transfer
9.	Week	Potential energy
10.	Week	Linear momentum and collisions
11.	Week	Rotation of a rigid object and about a fixed axis
12.	Week	Angular momentum
13.	Week	Recitation and Practice

Form Vb (İngilizce): Assessment Method

Number	Contribution
14	%10
6	%20
0	%0
0	%0
0	%0
0	%0
0	%0
0	%0
0	%0
1	%30
1	%40
21	%100
20	%50
1	%40
21	%100
	14 6 0 0 0 0 0 0 0 0 1 1 1 21 20

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	3	42
Laboratory	14	2	28
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary work,	18	5	90
reinforcement, preparation for the exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment			
Midterms (Study duration)	1	8	8
Final Exam (Study duration)	1	12	12
Total Workload			180
Total Workload/30 hours			6
ECTS			6

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Course Outcomes				
	1	2	3	4	5
1	X	X	X	X	X
2		X	X	X	
3			X	X	
4				X	X
5		X		X	
6					
7					
8					
9					
10					
11					

1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
Turkish-II	TUR 502	Spring	2	0	0	2	4
Prerequisites	None	•					
Course	Turkish						
Language Course Type	Compuls	orv					
Mode of			Learning/Hybr	id			
Delivery (face to face, distance learning)							
Learning and teaching strategies	Lecturing	g, discussion	and submission				
Instructor (s)		Kudret Cera					
Course Objective	language teach hin in writter evaluate respectin importan includes It is an ac and expr	sufficiently in how to con and verbal data; to give in g thoughts and the aims of citive learning essing skills.	and correctly, to nvey what he th ; to gain the abi e the habit of lis and speaking in ng and reading i directing the stu g course that air	n enables the sto be able to reflections in a rational lity to benefit from the puber of the puber of the puber of the agorems to develop stone of the pubers of the agorems to develop stone of the pubers of the agorems to develop stone of the agorems to develop stone of the agorems to develop stone of the agorems to develop stone of the agorems to develop stone of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of the agorems of	ect on a subject I, simple, origina om various sour g, thinking in a p lic; To comprehe ful and gaining k od listener and r udents' critical t	thoroughly al, effective ces and to planned way end the mowledge; eader. How hinking, cre	; to way /, It vever; eating
Course Content	Diction, communication, communication elements and types, factors preventing communication, basic concepts and terms related to speech. Physical elements that create sound and applied studies. Breathing training and breathing control, application exercises. Stress, intonation, tune at the crossroads. The mental, psychological, social and cultural elements and applied studies that create the sound. Features that should be present in the speaker. Other concepts related to speech. Using the body in speech, non-verbal communication. Look, eye contact, facial expression. Using the body in speaking, non-verbal communication and practical exercises. Using the body in speaking, non-verbal communication and practical exercises. Impression, persuasion. Correspondence Types, Thought Writings, Artistic Writings, Accessing Information, Library Use, Electronic Resources, Resource Discovery Tools, Scientific Research and Writing Techniques, Types of Speech and Oral Expression, Presentation Techniques.						
References	Ercilasun Century,	, Ahmet B .; Akçağ Pub.,	Turkish Languag Ankara, 2004.	ect, TDK Pub., A ge History from t Flag Pub., Istank	the Beginning to	the Twent	ieth

	Burning, Ali; Turkish Language and Composition Information for Universities, Yargı						
	Pub., Ankara, 2017.						
Learning	Knows the physical elements of speech.						
Outcomes	Knows the mental components of speech.						
	Gains knowledge of emphasis, intonation, and speech disorders.						
	Makes a prepared speech.						
	Creates scientific texts on subjects related to his field and understands and evaluates						
	scientific texts related to his field.						
	Gains writing skill.						
	Improves oral expression skills.						
	Knows the concepts and concepts of reading, comprehension, listening.						

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	Correspondence Types
2. Week	Thought Articles I
3. Week	Thought Writings II
4. Week	Artistic Writings I
5. Week	Artistic Writings II
6. Week	Accessing Information - Using the Library
7. Week	Access to Information - Electronic Resources
8. Week	Midterm
9. Week	Accessing Information - Resource Discovery Tools and Techniques
10. Week	Scientific Research and Writing Techniques-I
11. Week	Scientific Research and Writing Techniques-II
12. Week	Speech and Speech Types
13. Week	Presentation techniques
14. Week	Composition Information
15. Week	Paragraph and Paragraph Types of Expression
16. Week	Final Exam
17. Week	

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	0	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	0	%0
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%40
Final Exam	1	%60
Total	0	%100
Contribution of semester Works to success points	0	%40
Contribution of final exam to success points	0	%60
Total	0	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	2	28
Laboratory			
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary	14	2	28
work, reinforcement, preparation for the			
exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment			
Midterms (Study duration)	1	2	2
Final Exam (Study duration)	1	2	2
Total Workload		•	60
Total Workload/30 hours			2
ECTS			2

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*				
	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					Х

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS	
Turkish-I	TUR 501	Fall	2	0	0	2	4	
Prerequisites	None							
Course	Turkish							
Language								
Course Type	Compulse	ory						
Mode of	Face to fa	ace/Distance	e Learning/Hybr	id				
Delivery (face to								
face, distance								
learning)								
Learning and	Lecturing	g, discussion	and submission					
teaching								
strategies								
Instructor (s)	Lecturer	Kudret Cera	n					
Course objective	The Turk	ish Language	e course progran	m enables the st	udent to use his	/ her nativ	e	
	language	sufficiently	and correctly, to	o be able to refle	ect on a subject	thoroughly	; to	
	teach hin	n how to coi	nvey what he th	inks in a rationa	l, simple, origina	ıl, effective	way	
	in writter	n and verbal	; to gain the abi	lity to benefit fro	om various sour	ces and to		
	evaluate	data; to give	e the habit of lis	tening, criticizin	g, thinking in a p	lanned way	/ ,	
	respectin	ig thoughts a	and speaking in	front of the pub	lic; To comprehe	end the		
			-	n being successi			It	
	includes	the aims of o	directing the stu	ident to be a god	od listener and r	eader.		
Course Content	Language of Language Language Phoneme Elements Power, Ir	es and Types age Related e Studies, Tu es, Affixes of s of Sentence ateraction Be th Language,	i,, Development Theories, the al _l rkey phonetic fo Turkish, Roots i e, Sentence Type etween Languag	n Other Areas La t of Turkish Lang phabet used in T eatures of Turkis in Turkish, Word es, Turkish Word ges and Turkish, sh, Word Presen	uage and Histor urkish Spelling, h, Audio Alignm Making, Word Presence, Turk The Effect of Wo	ical Period, Turkish ent, Parts T Types, Phra ish Express orld Langua	Top ises, ion	
References	Aksan, Doğan; Language in Every Aspect, TDK Pub., Ankara, 1979. Ercilasun, Ahmet B.; Turkish Language History from the Beginning to the Twentieth Century, Akçağ Pub., Ankara, 2004. Ergin, Muharrem; Turkish Grammar, Flag Pub., Istanbul, 1998. Burning, Ali; Turkish Language and Composition Information for Universities, Yargı Pub., Ankara, 2017.							

Learning	Gains knowledge of the definition and functions of the language and the basic
Outcomes	features of Turkish.
	Knows the relationship between language and thought.
	Gains knowledge of the place of Turkish language in the world.
	Gains the ability to express himself correctly and effectively.
	Creates scientific texts on subjects related to his field and understands and evaluates
	scientific texts related to his field.
	Gains writing skill.
	Explains and exemplifies the phonetic features, structural features and sentence
	features of Turkish.
	Will be able to understand and evaluate what he has read.

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	Definition of Language, Features of Language, Language and Culture, Language and Communication, Language and Thought, Place of Turkish among World Languages, Classification of Languages: World languages in terms of origin, world languages in terms of structure.
2. Week	Development and Historical Periods of Turkish Language, Age of Turkish, Classification of Turkish Written Languages and Dialects, Theories Related to the Birth of Languages, Types of Language: dialect, accent, dialect, written language, spoken language
3. Week	The alphabet used in Turkish Spelling: Göktürk, Mani, Uighur alphabet Turkish Language Studies, Writing and Language Revolution, Ataturk and the Turkish language, phonetic features of Turkey Turkish, the Turkish Syllable Structure
4. Week	Vocal Harmony: big vowel harmony, little vowel harmony. Sound Phenomena: sound resemblance, sound change, sound derivation, sound drop, sound narrowing, collapse.
5. Week	Phonemes on Tracks: accent, intonation, pause. Basic Concepts of Morphology, Turkish Attachments: construction attachments, inflectional attachments
6. Week	Roots in Turkish, Word Making: analogy, derivation, karma, abbreviation Types of Words: words in terms of meaning, words in terms of genre and task.
7. Week	Phrases: phrases, exclamation group, title group, number phrase, reduplications, compound verb phrase, noun-verb / adjective-verb / adverb-verb phrase, abbreviation phrases
8. Week	Midterm
9. Week	Elements of the sentence: predicate, subject, object, place clause, mark complement, non-sentence elements
10. Week	Types of Sentences: sentences according to their structure, sentences according to the type of the predicate, sentences according to the place of the predicate, sentences according to their meanings.
11. Week	The Word Presence of Turkish, The Expressive Power of Turkish. Differences Between Idioms, Proverbs, Idioms and Proverbs, Quotes, Dialect Items
12. Week	Interaction Between Languages and Turkish, Richness Areas of Languages, Historical Depth and Geographical Extent, Word Presence and Expression Power, Proverbs and Expressive Power, Diversity in Kinship Names, Relationship and Kindness Words.

13. Week	The Effect of World Languages on Turkish Language, The Effect of Foreign				
	Languages in the Ancient Turkish Period, The Effect of Western Languages on				
	Turkish.				
14. Week	Usage of Turkish in Mass Media. Usage of Turkish in Social Media.				
15. Week	Discourse Disorders, Vicious Words in Speech and Writing, Density of Foreign				
	Words, Teaching in Foreign Language, Science Terms, Turkish in Business Life.				
16. Week	Final Exam				
17. Week					

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	0	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	0	%0
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%40
Final Exam	1	%60
Total	0	%100
Contribution of semester Works to success points	0	%40
Contribution of final exam to success points	0	%60
Total	0	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	14	2	28
Laboratory			
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary	14	2	28
work, reinforcement, preparation for the			
exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment			
Midterms (Study duration)	1	2	2
Final Exam (Study duration)	1	2	2
Total Workload			60
Total Workload/30 hours	1		2
ECTS			2

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*				
	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					X

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ANKARA BİLİM ÜNİVERSİTESİ

MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ

DERS BILGISI

Ders Adı	Kod	Dönem	Teori (saat / hafta)	Uygulama (saat / hafta)	Laboratuvar (saat / hafta)	Ulusal Kredi	AKTS	
TÜRK DİLİ-II	TUR 102	Bahar	2	0	0	2	4	
Ön Koşullar	Yok							
Ders Dili	Türkçe							
Ders Türü	Zorunlu							
Uygulama Şekli (yüz yüze, uzaktan eğitim)	Yüz yüze	/ Uzaktan Eğ	itim / Hibrit					
Öğrenme ve öğretme stratejileri	Konu anla	ıtımı, tartışma	ı ve sunum					
Eğitmen	Öğr. Gör.	Kudret Cerai	1					
Dersin Amacı	öğrenciyi etkili bir b değerlend duyma vo kazanmad olmaya yö	bir konu üze biçimde yazıl irme becerisi e topluluk k a, dinlemenir öneltmek ama	mı öğrencinin ana rinde etraflıca dü: ı ve sözlü aktarma kazandırabilmek; arşısında konuşn ı ve okumanın öne ıçlarını içerir. Bu: ecerilerinin gelişti	şündürebilmek; or ayı öğretmek; çeş dinleme, eleştirm na alışkanlığı ve emini kavratmak; nunla birlikte; öğr	na düşündüğünü a itli kaynaklardan ne, planlı düşünme rebilmek; başarı öğrenciyi iyi bir d rencilerin eleştire	akılcı, yalı yararlanma e, düşünce lı olmada inleyici ve l düşünme	n, özgün, a, verileri lere saygı , birikim e okuyucu , yaratma	
Ders İçeriği	temel kav çalışmalar durak kav uygulama diğer kavı ifadesi. Ko Konuşma Yazışma Elektronik	ram ve teriml Nefes eğitir şaki ezgi. Ses lı çalışmalar. ramlar. Konus onuşmada vü da vücudun k Fürleri, Düşü c Kaynaklar,	şim ögeleri ve tür er. Sesin oluşmas ni ve soluğu contı sin oluşmasını sağ Konuşmacıda bul şmada vücudun kullanılması, sözsü nce Yazıları, Sana Kaynak Keşif Ara atım Türleri, Sun	ını sağlayan fiziks tol etme,uuygulan layan zihinsel,psi unması gereken ö illanılması, sözsüz sı, sözsüz iletişim z iletişim ve uygu ttsal Yazılar, Bilgi çları, Bilimsel Ar	sel unsurlar ve uyş na çalışmaları. Vu kolojik,sosyla ve zellikler. Konuşn z iletişim. Bakış, ş ve uygulamalı ça ılamalı çalışmalar iye ulaşma, Kütür	gulamalı ırgu, tonlar kültürel ur na ile ilgili göz teması lışmalar. . İzlenim, ohane Kull	na, nsurlar ve olan , yüz ikna. anımı,	
Kaynaklar	Aksan, Doğan; Her Yönüyle Dil, TDK Yay., Ankara, 1979. Ercilasun, Ahmet B.; Başlangıçtan Yirminci Yüzyıla Türk Dili Tarihi, Akçağ Yay., Ankara, 2004. Ergin, Muharrem; Türk Dil Bilgisi, Bayrak Yay., İstanbul, 1998. Yakıcı, Ali; Üniversiteler İçin Türk Dili ve Kompozisyon Bilgileri, Yargı Yay., Ankara, 2017							
Öğrenme Çıktıları	Konuşmanın fiziksel unsurlarını bilir. Konuşmanın zihinsel unsurlarını bilir. Vurgu, tonlama, söyleyiş bozuklukları, hakkında bilgi sahibi olur. Hazırlıklı konuşma yapar. Alanı ile ilgili konularda bilimsel metin oluşturur ve alanı ile ilgili bilimsel metinleri anlar ve değerlendirir. Yazma becerisi kazanır. Sözlü anlatım becerilerini geliştirir. Okuma, anlama, dinleme kavram ve kavramalarını bilir.					nlar ve		

Form (Türkçe): Haftalara göre konular

Haftalar	Konular
1. Hafta	Yazışma Türleri
2. Hafta	Düşünce Yazıları I
3. Hafta	Düşünce Yazıları II
4. Hafta	Sanatsal Yazılar I
5. Hafta	Sanatsal Yazılar II
6. Hafta	Bilgiye ulaşma- Kütüphane Kullanımı
7. Hafta	Bilgiye ulaşma- Elektronik Kaynaklar
8. Hafta	Ara sınav
9. Hafta	Bilgiye Ulaşma- Kaynak Keşif Araçları ve Teknikleri
10. Hafta	Bilimsel Araştırma ve Yazma Teknikleri-I
11. Hafta	Bilimsel Araştırma ve Yazma Teknikleri-II
12. Hafta	Güzel Konuşma ve Sözlü Anlatım Türleri
13. Hafta	Sunum Teknikleri
14. Hafta	Kompozisyon Bilgileri
15. Hafta	Paragraf ve Paragrafta Anlatım Biçimleri
16. Hafta	Final Sınavı

Form (Türkçe): Değerlendirme Yöntemi

Dönem Çalışmaları	Sayı	Katkı
Katılım	157	%0
Laboratuvar	0	%0
Uygulama	0	%0
Saha Çalışması	0	%0
Pratik	0	%0
Ödev Değerlendirilmesi	0	%0
Sunum	0	%0
Proje	0	%0
Seminer	0	%0
Ara Sınav	1	%40
Final	1	%60
Toplam	0	%100
Dönem çalışmalarının başarı puanlarına katkısı	0	%40
Final sınavının başarı puanlarına katkısı	0	%60
Toplam	0	%100

Form VIb (İngilizce): İŞ YÜKÜ VE AKTS HESAPLAMA

Aktiviteler	Sayı	Süre (saat)	Toplam İş Yükü
Ders Süresi (x14)	14	2	28
Laboratuvar			
Uygulama			
Spesifik Pratik Eğitim			
Saha Faaliyeletleri			
Sınıf Dışı Çalışma Saatleri (Ön çalışma,	14	2	28
pekiştirme, sınavlara hazırlık)			
Sunum / Seminer Hazırlama			
Proje			
Ev Ödevi			
Ara sınavlar (Çalışma süresi)	1	2	2
Final Sınavı (Çalışma süresi)	1	2	2
Toplam İş Yükü			60
Toplam İş Yükü			2
AKTS			2

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*				
	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					X

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ANKARA BİLİM ÜNİVERSİTESİ

MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ

DERS BILGISI

Ders Adı	Kod	Dönem	Teori (saat / hafta)	Uygulama (saat / hafta)	Laboratuvar (saat / hafta)	Ulusal Kredi	AKTS
TÜRK DİLİ-I	TUR 101	Sonbahar	2	0	0	2	4
Ön Koşullar	Yok						
Ders Dili	Türkçe						
Ders Türü	Zorunlu						
Uygulama Şekli (yüz yüze, uzaktan eğitim)	Yüz yüze	/ Uzaktan Eğ	itim / Hibrit				
Öğrenme ve öğretme stratejileri	Konu anla	atımı, tartışma	ı ve sunum				
Eğitmen	Öğr. Gör.	Kudret Cerar	1				
Dersin Amacı	öğrenciyi etkili bir l değerlend duyma v kazanmad	bir konu üze biçimde yazılı lirme becerisi e topluluk k	rinde etraflıca dü:	şündürebilmek; o ayı öğretmek; çeş dinleme, eleştirn na alışkanlığı ve	doğru olarak kull na düşündüğünü a itli kaynaklardan ne, planlı düşünme erebilmek; başarı öğrenciyi iyi bir d	akılcı, yalı yararlanma e, düşünce lı olmada	n, özgün, a, verileri lere saygı , birikim
Ders İçeriği	Dilinin G Yazımınd Özellikler Sözcük Y Türkçenir	elişimi ve Tar la Kullanılan A ri, Ses Uyuml apımı, Sözcül 1 Söz Varlığı,	ihsel Dönemleri, Alfabeler, Türk D arı, Parçalar Üstü k Türleri, Sözcük Türkçenin Anlatı	Dillerin Doğuşu İ ili Çalışmaları, Ti Ses Birimleri, Tü Öbekleri, Cümler m Gücü, Diller A	ndeki Diller ve Di le İlgili Kuramlar ürkiye Türkçesinir ırkçenin Ekleri, Ti nin Ögeleri, Cümle rası Etkileşim ve arlığı, Yabancı Di	, Türkçeni 1 Fonetik 1 rkçede Kö 1 Türleri, Türkçe, Di	n ökler, inya
Kaynaklar	Dillerinin Türk Diline Etkisi, Türkçenin Kullanımı, Söz Varlığı, Yabancı Dille Öğretim Aksan, Doğan; Her Yönüyle Dil, TDK Yay., Ankara, 1979. Ercilasun, Ahmet B.; Başlangıçtan Yirminci Yüzyıla Türk Dili Tarihi, Akçağ Yay., Ankara, 2004. Ergin, Muharrem; Türk Dil Bilgisi, Bayrak Yay., İstanbul, 1998. Yakıcı, Ali; Üniversiteler İçin Türk Dili ve Kompozisyon Bilgileri, Yargı Yay., Ankara, 2017.				ıkara,		
Öğrenme Çıktıları	Dil ve düs Türk dilir Kendini d Alanı ile değerlend Yazma be Türkçenir	şünce arasında nin dünyadaki loğru ve etkili ilgili konulard lirir. ecerisi kazanın 1 ses özellikle	aki ilişkiyi bilir. yeri hakkında bil bir şekilde ifade la bilimsel metinle	gi sahibi olur. etme becerisi kazı er oluşturur, alanı iklerini ve cümle	kkında bilgi sahib anır. yla ilgili bilimsel özelliklerini açıkla	metinleri a	

Form (Türkçe): Haftalara göre konular

Haftalar	Konular
1. Hafta	Dilin Tanımı, Dilin Özellikleri, Dil ve Kültür, Dil ve İletişim, Dil ve Düşünce, Türkçenin
	Dünya Dilleri Arasındaki Yeri, Dillerin Sınıflandırılması: köken bakımından dünya dilleri,
	yapı bakımından dünya dilleri.
2. Hafta	Türk Dilinin Gelişimi ve Tarihsel Dönemleri, Türkçenin Yaşı, Türk Yazı Dillerinin ve
	Lehçelerinin Tasnifi, Dillerin Doğuşu İle İlgili Kuramlar, Dilin Türleri: lehçe, şive, ağız, yazı
	dili, konuşma dili
3. Hafta	Türkçenin Yazımında Kullanılan Alfabeler: Göktürk, Mani, Uygur alfabesi, Türk Dili
	Çalışmaları, Yazı ve Dil Devrimi, Atatürk ve Türk Dili, Türkiye Türkçesinin Fonetik
	Özellikleri, Türkçenin Hece Yapısı
4. Hafta	Ses Uyumları: büyük ünlü uyumu, küçük ünlü uyumu. Ses Olayları: ses benzeşmesi, ses
	değişmesi, ses türemesi, ses düşmesi, ses daralması, göçüşme.
5. Hafta	Parçalar Üstü Ses Birimleri: vurgu, tonlama, durak. Biçim Bilgisiyle İlgili Temel Kavramlar,
	Türkçenin Ekleri: yapım ekleri, çekim ekleri
6. Hafta	Türkçede Kökler, Sözcük Yapımı: örnekseme, türetme, karma, kısaltma Sözcük Türleri:
	anlam bakımından sözcükler, tür ve görev bakımından sözcükler
7. Hafta	Sözcük Öbekleri: tamlamalar, ünlem grubu, unvan grubu, sayı öbeği, ikilemeler, birleşik
0 11 0	eylem öbeği, isim-fiil/ sıfat-fiil/zarf-fiil öbeği, kısaltma öbekleri.
8. Hafta	Ara sinav
9. Hafta	Cümlenin Ögeleri: yüklem, özne, nesne, yer tamlayıcısı, belirteç tümleci, cümle dışı ögeler.
10. Hafta	Cümle Türleri: yapısına göre tümceler, yüklemin türüne göre tümceler, yüklemin yerine göre
11 11 0	tümceler, anlamlarına göre tümceler.
11. Hafta	Türkçenin Söz Varlığı, Türkçenin Anlatım Gücü. Deyimler, Atasözleri, Deyimler ve
10 11 0	Atasözleri Arasındaki Farklar, Alıntı Sözler, Ağız Ögeleri.
12. Hafta	Diller Arası Etkileşim ve Türkçe, Dillerin Zenginlik Alanları, Tarihsel Derinlik ve Coğrafi
	Yaygınlık, Söz Varlığı ve Anlatım Gücü, Atasözleri ve Anlatım Gücü, Akrabalık Adlarında
12 11 0	Çeşitlilik, İlişki ve Nezaket Sözleri.
13. Hafta	Dünya Dillerinin Türk Diline Etkisi, Eski Türkçe Döneminde Yabancı Dillerin Etkisi, Batı
14 11.0.	Dillerinin Türkçeye Etkisi.
14. Hafta	Kitle İletişim Araçlarında Türkçenin Kullanımı, Sosyal Medyada Türkçenin Kullanımı.
15. Hafta	Söyleyiş Bozuklukları, Konuşma ve Yazıda Kısır Söz Varlığı, Yabancı Sözlerin Yoğunluğu,
16. Hafta	Yabancı Dille Öğretim, Bilim Terimleri, İş Yaşamında Türkçe. Final Sınavı
	rinai sinavi
17. Hafta	

Form (Türkçe): Değerlendirme Yöntemi

Dönem Çalışmaları	Sayı	Katkı
Katılım	0	%0
Laboratuvar	0	%0
Uygulama	0	%0
Saha Çalışması	0	%0
Pratik	0	%0
Ödev Değerlendirilmesi	0	%0
Sunum	0	%0
Proje	0	%0
Seminer	0	%0
Ara Sınav	1	%40
Final	1	%60
Toplam	2	%100
Dönem çalışmalarının başarı puanlarına katkısı	1	%40
Final sınavının başarı puanlarına katkısı	1	%60
Toplam	2	%100

Form VIb (İngilizce): İŞ YÜKÜ VE AKTS HESAPLAMA

Aktiviteler	Sayı	Süre (saat)	Toplam İş Yükü
Ders Süresi (x14)	14	2	28
Laboratuvar			
Uygulama			
Spesifik Pratik Eğitim			
Saha Faaliyeletleri			
Sınıf Dışı Çalışma Saatleri (Ön çalışma,	14	2	28
pekiştirme, sınavlara hazırlık)			
Sunum / Seminer Hazırlama			
Proje			
Ev Ödevi			
Ara sınavlar (Çalışma süresi)	1	2	2
Final Sınavı (Çalışma süresi)	1	2	2
Toplam İş Yükü		•	60
Toplam İş Yükü			2
AKTS			2

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*				
	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					Х

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

COURSE INFORMATION

Course Name Occupational	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
Health and			(nours/week)	(nours/week)	(nours/week)	Credit	
Safety I							
Introduction to	OHS	Fall	1	0	0	1	1
Information	101		_			_	_
Technologies	101						
Prerequisites	None	1				<u> </u>	I
Coarse Language	English						
Course Type	Compu	lsorv					
Mode of		e Learning					
Delivery (face to		0					
face, distance							
learning)							
Learning and	Lecturir	ng. discussion	and submission	·			
teaching		G ,					
strategies							
Instructor (s)	Abdurra	ahman AKMA	AN, PhD				
Course objective			general concept	s of occupationa	l health and saf	ety, aim an	d
		importance		·		•	
	2.	Understand	No. 6331 OHS La	aw and related r	egulation		
	3.	Learn cause	s of occupationa	l accidents and t	heir consequent	ces.	
	4.	Learn conce	pt of hazard, risk	k, risk analysis, ri	sk assessment a	nd risk	
		managemer	it. Gain ability to	carry out risk as	ssessment		
	5.		employer duties				
	6.		employee duties				
	7.	•	ational accidents	s and occupation	nal diseases and	basic prote	ection
		methods					
	8.	Learn risk fa	ctors at workpla	ces and protecti	on principles.		
Course Content			es the student to	•			
	-		will learn safe wo	•	-		-
			ect problems ass		-		
			usative factors of			eiements ir	1
Poforoncos	-	_	for accident con		_	the Dress	<u> </u>
References	1.		Safety, Health, a		tai Concepts for	the Proces	5
		•	lmar, Cengage Le	•			
	2.	Goetsch, D.I	, Occupational S	Safety and Healt	h for Technolog	ists, Engine	ers,
		and Manage	ers, 8th Edition, P	earson, 2015			
	3.	Friis, R.H., O	ccupational Hea	lth and Safety fo	r 21 st Century, J	ones & Bar	tlett
		Learning, 20	16				
	4.	Occupationa	al Safety and Hea	lth Law and rela	ted regulation		
Learning	After ta		rse students will				
outcomes	1.	_	derstand the im		occupational he	alth and saf	fety
	2.	•	ing knowledge a		•		

- 3. Risk management skills
- 4. Ability to recognize risk factors at workplace
- 5. Understand employer duties to ensure the safety and health
- 6. Understand employee duties to ensure their own safety and health

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	Introduction to OHS
2. Week	General concepts of occupational health and safety, aim and importance
3. Week	Hazard and Risk
4. Week	Causes of work accident: Unsafe conditions and unsafe act
5. Week	Work accident and occupational disease statistics
6. Week	Work accidents and near misses
7. Week	Mid- term exam
8. Week	Occupational Diseases and Work-related diseases
9. Week	Historical Development of OHS in the World and Turkey
10. Week	No. 6331 OHS Law and related regulation
11. Week	No. 6331 OHS Law and related regulation
12. Week	Introduction to risk assessment in OHS
13. Week	Risk assessment in OHS
14. Week	Example risk assessment in OHS
15. Week	Basics of protection from work accidents and occupational diseases
16. Week	Final Exam

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	14	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	2	%20
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%20
Final Exam	1	%60
Total	18	%100
Contribution of semester Works to success points	17	%40
Contribution of final exam to success points	1	%60
Total	18	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	1	1	14
Laboratory			
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary work, reinforcement, preparation for the exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment	2	7	14
Midterms (Study duration)	1	1	1
Final Exam (Study duration)	1	1	1
Total Workload		•	30
Total Workload/30 hours			1
ECTS			1

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*					
	1	2	3	4	5	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11					Х	

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ANKARA SCIENCE UNIVERSITY FACULTY OF ENGINEERING AND ARCHITECTURE

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
Occupational Health and Safety II	OHS 102	Spring	1	0	0	1	1
Prerequisites	None						
Coarse Language	English						
Course Type	Compu	lsory					
Mode of Delivery (face to face, distance learning)	Distanc	e Learning					
Learning and teaching strategies	Lecturin	ng, discussior	n and submission				
Instructor (s)	Abdurra	ahman AKMA	N, PhD				
Course Objective Course Content	 Understand importance of health and safety management system Introduce the students to the concept of a system to proactively manage occupational health and safety Understand physical hazards Understand chemical hazards Understand biological hazards Understand psychosocial hazards Understand ergonomic hazards Having knowledge about PPEs and how to use PPE's 						
	This course introduces the student occupational health and safety management systems. Students will learn major hazards in the workplaces and how to avoid them. Students will learn about the importance and usage areas of PPE in occupational health and safety.						them. I
References	 Speegle, M., Safety, Health, and Environmental Concepts for the Process Industry, Delmar, Cengage Learning, 2013 Goetsch, D.L., Occupational Safety and Health for Technologists, Engineers, and Managers, 8th Edition, Pearson, 2015 Friis, R.H., Occupational Health and Safety for 21st Century, Jones & Bartlett Learning, 2016 Occupational Safety and Health Law and related regulation 						
Learning outcomes	After taking this course students will be able to; 1. Ability to understand the importance of the occupational health and safety management systems 2. Have satisfying knowledge about major hazards in workplaces 3. Understand what type of PPEs are and how they should be used						

Form IVb (English): Subjects by weeks

Weeks	Subjects
1. Week	Introduction to Health and safety management systems
2. Week	Health and safety management systems
3. Week	Physical hazards
4. Week	Physical hazards
5. Week	Chemical hazards
6. Week	Chemical hazards
7. Week	Mid- term exam
8. Week	Biological hazards
9. Week	Biological hazards
10. Week	Psychosocial hazards
11. Week	Psychosocial hazards
12. Week	Ergonomic hazards
13. Week	Ergonomic hazards
14. Week	Personal protective equipments
15. Week	Personal protective equipments
16. Week	Final Exam

Form Vb (İngilizce): Assessment Method

Semester Works	Number	Contribution
Attendance	14	%0
Laboratory	0	%0
Application	0	%0
Fieldwork	0	%0
Practice	0	%0
Homework Assessment	2	%20
Presentation	0	%0
Project	0	%0
Seminar	0	%0
Mid-term Exams	1	%20
Final Exam	1	%60
Total	18	%100
Contribution of semester Works to success points	17	%40
Contribution of final exam to success points	1	%60
Total	18	%100

Form VIb (English): WORKLOAD AND ECTS CALCULATION

Activities	Number	Duration (hour)	Total Workload
Course Duration (x14)	1	1	14
Laboratory			
Application			
Specific practical training			
Field activities			
Study Hours Out of Class (Preliminary work, reinforcement, preparation for the exams)			
Presentation / Seminar Preparation			
Project			
Homework assignment	2	7	14
Midterms (Study duration)	1	1	1
Final Exam (Study duration)	1	1	1
Total Workload		•	30
Total Workload/30 hours			1
ECTS			1

Form VIIb (English): THE COURSE LEARNING OUTCOMES - PROGRAM OUTCOMES MATRIX

Program Outcomes	Contribution Level*					
	1	2	3	4	5	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11					Х	

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ANKARA SCIENCE UNIVERSITY FACULTY OF ENGINEERING AND ARCHITECTURE INDUSTRIAL ENGINEERING DEPARTMENT COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS	
Calculus II	MATH 102	Fall	4	0	0	4	6	
Prerequisites	Math 10	1						
Course Language	English							
Course Type	Compuls	sory						
Mode of Delivery	Face to 1	face						
Learning and Teaching strategies	Lecturin	g, discussio	n, and submissi	on				
Instructor(s)	Berrin Ş	entürk, PhD)					
Course objective	concepts and appl sequence converge integrati	The main objective for this course is to acquaint you with fundamental calculus concepts involving functions of more than one variable, and to help you to understand and apply such functions in a variety of settings. The course aims to study infinite sequences and series, convergence test for series, absolute and conditional convergence, and Taylor polynomials and power series, volumes of rotation, integration techniques, partial derivatives, and local extrema of two variable functions, double and triple integrals.						
Course content	Lines an Partial D Lagrang	Sequences, Series, Taylor Series, Vectors in R^2 and R^3, Dot and Cross Products, Lines and Planes in R^3, Functions of Several Variables, Limits and Continuity, Partial Derivatives, Directional Derivatives, Maximum and Minimum Values, Lagrange Multipliers, Double Integrals, Triple Integrals, Vector Functions, Limits and Derivatives.						
References	2.	 Calculus (Metric Version), 8th (or 7th) Edition, by James Stewart Calculus, 14th Edition, by George B. Thomas (Supplementary Book) 						
Learning Outcomes	Upon successful completion of this course, a student will be able to: 1. Test series for convergence and divergence, represent elementary and transcendental functions of one variable as Taylor or Maclaurin series 2. Perform vector operations such as vector addition, scalar multiplication, dot product and cross product 3. Relate vector operations to geometric notions and structures such as distance, projection, orthogonality, parallelism, lines, and planes in R^3 4. Solve maximum and minimum problems and apply the method of Lagrange multipliers for multivariable functions 5. Evaluate limits, partial derivatives, directional derivatives, multiple integrals of multivariable functions 6. Compute limits, derivative and integrals of vector functions. 7. Expose to the concept of three dimensional analytical geometry.							

Subjects by weeks

Weeks	Subjects
1. week	11.1 Sequences 11.2 Series
	11.3 The integral testThe Limit of a Function,
2. week	11.4 The comparison tests 11.5 Alternating series
3.week	11.6 Absolute Convergence, the Ratio and Root Tests 11.8 Power Series
4.week	11.9 Representation of Functions as Power Series 11.10 Taylor and Maclaurin Series
5.week	12.1 3D Coordinate Systems 12.2 Vectors 12.3 The Dot Product 12.4 The Cross Product
6.week	12.5 Equations of Lines and Planes 12.6 Cylinders and Quadric Surfaces
7.week	13.1 Vector functions and space curves 13.2 Derivatives and integrals of vector functions 13.3 Arc Length
8.week	Midterm Exam (TBA)
9.week	13.4 Velocity and Acceleration 14.1 Functions of Several Variables
10.week	14.2 Limits and Continuity 14.3 Partial Derivatives
11.week	14.4 Tangent Planes and Linear Approximations 14.5 The chain rule 14.6 Directional Derivatives and the Gradient Vector
12.week	14.7 Maximum and Minimum Values 14.8 Lagrange Multipliers
13.week	15.1 Double integrals over rectangles15.2 Double integrals over general regions15.3 Double integrals in polar coordinates
14.week	15.6 Triple integrals 15.7 Triple integrals in cylindrical coordinates

	15.8 Triple integrals in spherical coordinates 15.9 Change of variable in multiple integrals
16.week	Final Exam

Assessment Method

Semester Works	Number	Contribution
Attendance	14	0%
Laboratory	0	0%
Application	8	0%
Fieldwork	0	0%
Practice	0	0%
Homework Assessment	1	5%
Quiz	5	20%
Presentation	0	0%
Project	0	0%
Seminar	0	0%
Mid-term Exam(s)	1	30%
Final Exam	1	45%
Total	30	100%
Contribution of semester Works to success points	29	55%
Contribution of final exam to success points	1	45%
Total	30	100%

Workload and ECTS Calculation

Activities	Number	Duration (hour)	Total Workload		
Course Duration (x14)	14	4	56		
Laboratory	0	0	0		
Application	0	0	0		
Specific practical training	0	0	0		
Field activities	0	0	0		
Study Hours Out of Class (Preliminary work, reinforcement, preparation for the exams)	14	6	84		
Presentation / Seminar Preparation	0	0	0		
Project	0	0	0		
Homework assignment	1	5	5		
Quiz	5	3	15		
Midterms (Study duration)	1	10	10		
Final Exam (Study duration)	1	10	10		
Total Workload	180				
Total Workload/30 hours	6				
ECTS	6				

Program Learning Outcomes - Course Learning Outcomes Matrix

Program Learning	Course Learning Outcomes				
Outcomes	LO1	LO2	LO3	LO4	LO5
1	5				
2		5			5
3					
4			5		
5					
6					
7				5	
8					
9					
10					
11					

1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ANKARA SCIENCE UNIVERSITY FACULTY OF ENGINEERING AND ARCHITECTURE INDUSTRIAL ENGINEERING DEPARTMENT COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS	
Calculus I	MATH 101	Fall	4	0	0	4	6	
Prerequisites	None							
Course Language	English							
Course Type	Compuls	sory						
Mode of Delivery	Face to f	ace						
Learning and Teaching strategies		Lecturing, discussion, and submission						
Instructor(s)	,	Berrin Şentürk, PhD						
Course objective	The main goals of the course are to develop and strengthen the students' problem-solving skills and to teach them to read, write, and think in the language of mathematics. Students should be able to apply the tools of calculus to a variety of problem situations.							
Course content		The concepts of Limit and Continuity, The Derivative, Applications of the Derivative, The Integration, Techniques of Integration, Applications of the Integral.						
References	 Calculus (Metric Version), 8th (or 7th) Edition, by James Stewart Calculus, 14th Edition, by George B. Thomas (Supplementary Book) 							
Learning Outcomes	Upon successful completion of this course, a student will be able to: 1. Recall definitions, statements of theorems, certain examples and counterexamples pertaining to functions of one variable. 2. Calculate limits and continuity for functions of one variable. 3. Calculate the derivatives of elementary and transcendental functions of one variable, tangent line, the chain rule, and implicit differentiation. 4. Compute the integrals of elementary and transcendental functions of one variable, method of substitution, integration by parts, powers and products of trigonometric functions, trigonometric substitution, and partial fractions. 5. Solve problems of related rates, minimum-maximum, linear approximations, graphing functions, length of a curve, planar area, and volume.							

Subjects by weeks

Weeks	Subjects
1. week	Appendix D: Trigonometry, The Limit of a Function, Calculating Limits using the Limit Laws

2, week Continuity 3.weck Derivatives and Rates of Change The Derivatives as a Punction Differentiation Formulas 4.week The Chain Rule Implicit Differentiation 8.week Iniorar Approximations and Differentials Inverse Functions Exponential Functions and Their Derivatives 6.week Logarithmic Functions Exponential Functions Inverse Trigonometric Functions Inverse Trigonometric Functions Inverse Trigonometric Functions Inverse Trigonometric Functions 7.week Maximum and Minimum Values The Maximum and Minimum Values The Maximum and Minimum Values The Maximum and Minimum Values The Maximum and Minimum Values The Mean Value Theorem 8.week Summary of Curve Sketching Midterm Exam (TBA) 9.week Antiderivatives Affect the Shape of a Graph Summary of Curve Sketching Midterm Exam (TBA) 10.week The Substitution Rule Indefinite Integrals and the Net Change Theorem The Substitution Rule Indefinite Integrals and the Net Change Theorem The Substitution Rule Integrals Trigonometric Integrals Trigonometric Integrals Trigonometric Integrals Improper Integrals Improper Integrals Improper Integrals Improper Integrals Improper Integrals Improper Integrals Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes Volumes Volumes Trigonometric Substitution Rule Area of a Surface of Revolution Final Exam (TBA)		T: '/ / T (" '/ TT ' / 1 A / /
3.week The Derivative as a Function Differentiation Formulas 4.week Derivatives of Trigonometric Functions The Chain Rule Implicit Differentiation 8.week Linear Approximations and Differentials Inverse Functions Exponential Functions and Their Derivatives 6.week Derivatives of Logarithmic Functions Derivatives of Logarithmic Functions Inverse Trigonometric Functions, Hyperbolic Functions 7.week Maximum and Minimum Values The Mean Value Theorem 8.week How Derivatives Affect the Shape of a Graph Summary of Curve Sketching Midterm Exam (TBA) 9.week Optimization problems Antiderivatives Areas and Distances The Definite Integrals and the Net Change Theorem The Substitution Rule 10.week Integration by Parts Trigonometric Substitution Rule 11.week Integration of Rational Functions by Partial Fractions Improper Integrals 12.week Volumes Volumes Volumes Volumes by Cylindrical Shells Average Value of a Function Arc length Area of a Surface of Revolution	2. week	Limits at Infinity; Horizontal Asymptotes Continuity
4.week The Chain Rule Implicit Differentiation Related Rates Linear Approximations and Differentials Inverse Functions Exponential Functions and Their Derivatives 6.week Derivatives of Logarithmic Functions Inverse Trigonometric Functions, Hyperbolic Functions Indeterminate Forms and l'Hospital's rule Maximum and Minimum Values The Mean Value Theorem 8.week How Derivatives Affect the Shape of a Graph Summary of Curve Sketching Midtern Exam (TBA) 9.week Antiderivatives Affect the Shape of a Graph Summary of Curve Sketching Midtern Exam (TBA) 10.week Antiderivatives Areas and Distances The Definite Integral 11.week Integrals and the Net Change Theorem The Substitution Rule 11.week Integration by Parts Trigonometric Substitution 12.week Integration of Rational Functions by Partial Fractions Improper Integrals Trigonometric Substitution 13.week Volumes Volumes Volumes Volumes Of Revolution Average Value of a Function Are length Area of a Surface of Revolution	3.week	The Derivative as a Function
Linear Approximations and Differentials Inverse Functions Exponential Functions Exponential Functions Logarithmic Functions Derivatives of Logarithmic Functions Inverse Trigonometric Functions, Hyperbolic Functions Indeterminate Forms and l'Hospital's rule Maximum and Minimum Values The Mean Value Theorem 8.week	4.week	The Chain Rule
6.week Derivatives of Logarithmic Functions Inverse Trigonometric Functions, Hyperbolic Functions 7.week Indeterminate Forms and l'Hospital's rule Maximum and Minimum Values The Mean Value Theorem 8.week How Derivatives Affect the Shape of a Graph Summary of Curve Sketching Midterm Exam (TBA) 9.week Antiderivatives Areas and Distances The Definite Integral 10.week Indefinite Integrals and the Net Change Theorem The Substitution Rule 11.week Trigonometric Integrals Trigonometric Substitution 12.week Integration of Rational Functions by Partial Fractions Improper Integrals 13.week Volumes Volumes Volumes Volumes Volumes Volumes Volumes Function Are length Area of a Surface of Revolution	5.week	Linear Approximations and Differentials Inverse Functions
7.week Maximum and Minimum Value's The Mean Value Theorem How Derivatives Affect the Shape of a Graph Summary of Curve Sketching Midterm Exam (TBA) Optimization problems Antiderivatives Areas and Distances The Definite Integral The Fundamental Theorem of Calculus Indefinite Integrals and the Net Change Theorem The Substitution Rule Integration by Parts Trigonometric Integrals Trigonometric Substitution Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes by Cylindrical Shells Average Value of a Function Area of a Surface of Revolution	6.week	Derivatives of Logarithmic Functions
8.week Summary of Curve Sketching Midterm Exam (TBA) 9.week Optimization problems Antiderivatives Areas and Distances The Definite Integral 10.week Indefinite Integrals and the Net Change Theorem The Substitution Rule 11.week Integration by Parts Trigonometric Integrals Trigonometric Substitution 12.week Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes by Cylindrical Shells 14.week Average Value of a Function Are length Area of a Surface of Revolution	7.week	Maximum and Minimum Values
9.week Antiderivatives Areas and Distances The Definite Integral 10.week Indefinite Integrals and the Net Change Theorem The Substitution Rule 11.week Integration by Parts Trigonometric Integrals Trigonometric Substitution 12.week Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes by Cylindrical Shells Average Value of a Function Area of a Surface of Revolution	8.week	Summary of Curve Sketching
10.week Indefinite Integrals and the Net Change Theorem The Substitution Rule 11.week Trigonometric Integrals Trigonometric Substitution 12.week Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes by Cylindrical Shells Average Value of a Function Arc length Area of a Surface of Revolution	9.week	Antiderivatives Areas and Distances
11.week Trigonometric Integrals Trigonometric Substitution Integration of Rational Functions by Partial Fractions Improper Integrals Areas Between Curves Volumes Volumes Volumes by Cylindrical Shells Average Value of a Function Arc length Area of a Surface of Revolution	10.week	Indefinite Integrals and the Net Change Theorem
12.week Improper Integrals Areas Between Curves Volumes Volumes by Cylindrical Shells Average Value of a Function Arc length Area of a Surface of Revolution	11.week	Trigonometric Integrals
13.week Volumes Volumes by Cylindrical Shells Average Value of a Function Arc length Area of a Surface of Revolution	12.week	,
14.week Arc length Area of a Surface of Revolution	13.week	Volumes
Final Final Exam (TBA)	14.week	Arc length
	Final	Final Exam (TBA)

Assessment Method

Semester Works	Number	Contribution
Attendance	14	0%
Laboratory	0	0%
Application	0	0%
Fieldwork	0	0%
Practice	8	0%
Homework Assessment	1	5%
Quiz	5	20%
Presentation	0	0%
Project	0	0%
Seminar	0	0%
Mid-term Exam(s)	1	30%
Final Exam	1	45%
Total	30	100%
Contribution of semester Works to success points	29	55%
Contribution of final exam to success points	1	45%
Total	30	100%

Workload and ECTS Calculation

Activities	Number	Duration (hour)	Total Workload	
Course Duration (x14)	14	4	56	
Laboratory	0	0	0	
Application	0	0	0	
Specific practical training	0	0	0	
Field activities	0	0	0	
Study Hours Out of Class (Preliminary work, reinforcement, preparation for the exams)	14	6	84	
Presentation / Seminar Preparation	0	0	0	
Project	0	0	0	
Homework assignment	1	5	5	
Quiz	5	3	15	
Midterms (Study duration)	1	10	10	
Final Exam (Study duration)	1	10	10	
Total Workload	180			
Total Workload/30 hours	6			
ECTS	6			

Program Learning Outcomes - Course Learning Outcomes Matrix

Program Learning	Course Learning Outcomes				
Outcomes	LO1	LO2	LO3	LO4	LO5
1	5				
2		5			5
3					
4			5		
5					
6					
7				5	
8					
9					
10					
11					

¹ Lowest, 2 Low, 3 Average, 4 High, 5 Highest