İTÜ
COURSE SYLLABUS FORM

Course Name
Fluid Mechanics

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
AKM 204E	6	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		

Course Type	Compulsory	Course Language	English

Course Prerequisites	MAT 102E MIN DD OR MAT 104E MIN DD

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	30%	40%	25%	5%

Course Description	Introduction. Unit systems. Hydrostatic.Pressure at a point.Calculation of pressure forces.Kinematics of fluids.Basic equations of one dimensional flow (continuity, energy and impuls-momentum equations).One dimensional flow of ideal fluids.One dimensional flow of real fluids.Two and three dimensional flow of ideal fluids.Potential (irrotational) flows.Two and three dimensional flows of real fluids.Boundary layer.Dimensional Analyses and Similuted.

Course Objectives	1.To give the definition of fluids and unit systems, 2.To give the principles of hydrostatic and calculation of pressure forces, 3.To evaluate the basic equations for ideal and real fluids in the case of one,two and three dimensional flows.(continuity, energy and impuls-momentum equations.) and their applications. 4.To examine the rotational and irrotational flows. 5.To give the boundary layer,dimensional analyses and similuted concepts.

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. to converte the units and unit systems, II. Calculate the pressure forces on plane and curved surfaces, III. To apply the basic equations of ideal and real fluids for practical problems, IV. To check the flow rotational or irrotational, V. To give interpretation about boundary layer,dimensional analyses and similuted . VI. And they gain the skill of application of these concepts.

Textbook	Streeter,V.,L.,Wylie E.,B., 1998, Fluid Mechanics, Mc Graw Hill, ISBN:0-07-548015-. Frank M.White, 1987, Fluid Mechanics, Mc Graw Hill, ISBN:0-07-Y66525-. W.L.McCabe,J.c.Smith,P.Hariott, 2005, Unit Operations of Chemical Engineering,7th edition, McGraw Hill, ISBN:007-124710-6.

Other References	Featherstone,R.,E.,Nalluri,C., 1995, Civil Engineering Hydraulics, Blackwell Science, ISBN:0-632-03863. Irwing H.Shames, 1962, Mechanics of Fluids, Mc Graw Hill. R.B.Bird,W.E.Stewart,E.N.Lightfood, 2002, Transport Phenomena, 2nd edition, John Wiley and Sons,Inc, ISBN:R.B.Bird,W.E. B.M.Sümer,Ý.Ünsal.M.Bayazýt, 1983, Hidrolik, Birsen Yayınevi. Y.A.Çengel,John M.Cimbala, 2008, Akışkanlar Mekaniği, Güven Bilimsel, ISBN:978-975-6240. C.Ilgaz,M.E.Karahan,A.Bulu, 2000, Akışkanlar Mekaniği ve Hidrolik Problemleri, Çağlayan Kitabevi, ISBN:975-436-038-. Richard H.F.Pao, 1961, Fluid Mechanics, John Wiley and Sons,Inc., ISBN:61-11499.

Homework & Projects	At least two homework is going to be given to the students,to teach this course effectively. All homework problems are to be handed in two weeks after they are assigned. Homework problems may be used as a source for exams.

Laboratory Work	None.
Computer Use	Computer can be used during the home work preparation during the solution of problems.
Other Activities	Inclass studies

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	25%
	Quizzes	2	10%
	Homework	2	10%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities	1	10%
	Final Exam	1	45%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Unit Systems - Dimensional Homogeneity - Physical Properties of Fluids	I
2	Hydrostatic - Pressure Concept - Computation of Pressure Forces	II
3	Basic Equations of Fluid Statics - Relative Equilibrium	II
4	Kinematics of Fluids	III
5	Basic Equations of One-Dimensional Flow	III
6	One-Dimensional Flow of Ideal Fluids - Applications	III
7	One-Dimensional Flow of Real Fluids	III
8	Laminar and Turbulent Flows	III
9	Two-Dimensional Flow of Ideal Fluids	III
10	Velocity Potential Flows	IV
11	Two-Dimensional Flow of Real Fluids	III
12	Hagen-Poiseuille Law	III
13	Darcy-Weisbach Law - Applications	III
14	Boundary Layer Concept,Dimensional Analyses and Similutude	V

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
History of Turkish Revolution I						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
ATA 101	7	2	2	2	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	Course Language	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100

Course Description	A definition of Revolution The aim and the importance of the Turkish history of revolution General state of the Ottoman Empire the reason for the decline Efforts to save the Ottoman Empire The current ideals The First World War Societies Mustafa Kemal in Anatolia and the Congresses The opening of the Great Turkish National Assembly Reactions to the National Government National and International policy The Mudanya treaty Lousanne conference
Course Objectives	1.Teaching the recent history of Turkey to university students 2.Enlightening students about Turkish Revolution Atatürk s political doctrine and his principles 3.Promoting embracement of Turkish Revolution s aim and mission of modernization by university students
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Will have an idea how a model of a state and society shakes by internal and external factors II. Will have a cultural background about 19th and 20th century movements which affect today III. Will have information about foundation and conditions of foundation of Turkish Republic IV. Will have a general understanding about recent history of Turkey V. Will have a general information about the conditions which created present day VI. Will have an ability to compare the conditions of past and present
Textbook	REFIK TURAN MUSTAFA SAFRAN NECDET HAYTA, 2009, ATATÜRK ÝLKELERI VE İNKILAP TARIHI, OKUTMAN YAYINCILIK, ISBN:978605588409.
Other References	
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to course and processes like revolutions and revolts which politically and socioeconomically affect societies	I
2	Factors which prepare Turkish Revolution I Collapse of the Ottoman state and society model	I
3	Factors which prepare Turkish Revolution II Important movements in 18th and 19th century in the world and their effects to Ottoman Empire 1	I
4	Factors which prepare Turkish Revolution III Ideas upon saving Ottoman Empire and Balance policy	I
5	Factors which prepare Turkish Revolution IV Young Turks and Constitutional Monarchy periods I and II	I
6	Factors which prepare Turkish Revolution V Imperialism in early 20th century reasons of World War I World War I and Ottoman Empire	I,II
7	Ottoman Empire after Armistice of Mondros Anatolia and Mustafa Kemal Pasha	III
8	Resistance movements in Anatolia against invasion and local congress powers	III
9	Mustafa Kemal Pasha s landing in Samsun and attempts of organizing depending on congresses I	III
10	Mustafa Kemal Pasha s landing in Samsun and attempts of organizing depending on congresses II	III
11	Opening of Great National Assembly of Turkey and conflict of Istanbul and Ankara	III
12	War of Independence its fronts and Armistice of Mudanya	III
13	Foreign policy during War of Independence	III,IV,V
14	Abolition of Sultanate and Treaty of Lausanne	III-VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			X
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
History of Turkish Revolution II						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
ATA 102	8	2	2	2	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100%

Course Description	The declaration of the Republic The importance of the leader and the staff in the revolution Constitutional solutions to the problems related to the Lausanne Conference The participation of Turkey in pacts and in international organizations Reactions to the new governmental structure Trials in the multi party system The Home and foreign policy of the Republic of Turkey Atatürk s foreign policy to inspire confidence in the future of Turkey Kemalism the Principles of Atatürk
Course Objectives	1.Teaching the recent history of Turkey to university students in the context of 20th century international progresses 2.Enlightening students about Turkish Revolution Atatürk s political doctrine and his principles 3.Promoting embracement of Turkish Revolution aim and mission of modernization by university students
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Will have general information about recent history of Turkey II. Will have an understanding about foundation thought and main principles of Turkish Republic III. Will have a general information about 20th century world main international progresses which affects present day IV. Will have essential understanding of development of democracy in Turkey V. Will have information about international problems of Turkey and their reasons VI. Will have an ability to compare the conditions of past and present
Textbook	Refik Turan Mustafa Safran Necdet Hayta, 2009, Atatürk İlkeleri ve İnkılap Tarihi, Okutman Yayıncılık, ISBN:978605588409.
Other References	
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Political life in Atatürk period I Announcement of Ankara as capital announcement of Republic abolition of caliphate	I
2	Political life in Atatürk Period II 1924 1930	I
3	Political life in Atatürk Period III 1931 1938	I
4	Foreign Policy in Atatürk Period I 1923 1930	I
5	Foreign Policy in Atatürk Period II 1931 1938	I
6	Constitutional progresses and judicial breakthroughs in Atatürk Period	I
7	Developments of education and culture in Atatürk Period	I
8	Developments of economy in Atatürk Period	I
9	Atatürk s Principles I	II
10	Atatürk s Principles II	II
11	Atatürk s Principles III	II
12	Ismet Ýnönü Period 1938 1950	I-III-IV
13	Democrat Party Period 1950 1960	I-III-IV-V
14	Political life in Turkey between 1960 1993	I-III-IV-V-VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			X
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	Date	Signature

İTÜ
COURSE SYLLABUS FORM

Course Name						
Introduction to Programming Language (Python)						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
BIL 100E	1-3	3	4.5	1	0	2

Department/Program	Common Pool		

Course Type	Engineering Science	Course Language	English

Course Prerequisites	None

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	50	50		

Course Description	Introduction to Python Programming, Computing Environment, Variables, Simple I/O, Arithmetic and Logic Operators, Error Analysis and Debugging, Data Types, Arrays, Sorting Arrays, Searching Arrays, Simple Plot, Introduction to Algorithms, Program Flow Control, Logical Expressions, Selective Execution Statements, Recursive Execution Statements, Basic Building Blocks (Modules, Procedures, Functions, Subroutines), Advanced I/O, Files and Records, Handling String/Characters, Matrices and Multidimensional Arrays, Data fitting, Iterations, SciPy/NumPy Libraries, Linear Algebra Applications, Polynomials Examples,

Course Objectives	1. To familiarize students with the fundamentals of scientific computing concepts 2. To develop problem solving skills 3. To develop skills in constructing an algorithm, 4. To train students how to use Python programming language problem solver program in scientific and engineering calculations 5. To train students to visualize their results and prepare written reports

Course Learning Outcomes	Student, who passed the course satisfactorily can: Learn the syntax Analyze a problem and develop an algorithm Test, debug, and verify the program Understand and do both pre- and post-processing of raw data (input) and produced data (output) for scientific and engineering problems Solve simple numerical problems by using built-in and script functions Prepare scientific report

Textbook	"Starting out with Python", Tony Gaddis, Pearson Education, 2015.

Other References	

Homework & Projects	

Laboratory Work	Laboratory sessions will be based on the material covered in the lectures.

Computer Use	Computer use in this course is compulsory.

Other Activities	None

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	30%
	Quizzes	10	40%
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	30%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Python Programming	1
2	Introduction to Program Computing Environment	1-2
3	Variables, Operations and Simple Plot	2-5-6-7
4	Aritmetic and Logic Operators	2-3-4-6-7
5	Introduction to Algoritms, Flow Control,	2-3-4-5-6-
6	Functions	2-4-5-6
7	Arrays	2-4-5-6
8	Solving of Simple Equations	2-3-4-5-6-
9	Polynomials Examples	2-3-4-5-6
10	Errors and Source of Errors	2-3-4-5-6-
11	Basic Plot	2-3-4-5-6-
12	Advanced I/O, File Operations	2-3-4-6-7
13	SciPy/NumPy Libraries	2-4-6
14	Basic Linear Algebra	2-3-4-6

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	_Date_	_Signature_

İTÜ
COURSE SYLLABUS FORM

Course Name						
Introduction to Scientific and Engineering Computing (MATLAB)						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
BIL113E	2	3	4,5	1	-	2

Department/Program	MAT202E veya eşdeğeri dersi seçimli alan ya da hiç almayan programlar

Course Type	Compulsory	Course Language	English

Course Prerequisites	BIL101E

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	50	50		

Course Description	Introduction to Scientific and Engineering Computing, Introduction to Program Computing Environment,Variables, Operations and Simple Plot, Algorithms and Logic Operators, Flow Control, Errors and Source of Errors, Functions, Linear Algebra Applications, Solving Equations Applications, Polynomials Examples, Curve Fitting Applications, Interpolation Applications, Numerical Integration Applications, Symbolic Mathematics, ODE Solutions with built-in functions

Course Objectives	1. To familiarize students with the fundamentals of scientific computing concepts 2. To develop problem solving skills 3. To develop skills in constructing an algorithm, 4. To train students how to use problem solver program in scientific and engineering calculations 5. To train students to visualize their results and prepare written reports

Course Learning Outcomes	Students will be able to, I. Learn the knowledge on contemporary issues of engineering problems and relate them with the problem solvers II. Learn the syntax III. Analyze a problem and develop an algorithm IV. Test, debug, and verify the program V. Understand and do both pre- and post-processing of raw data (input) and produced data (output) for scientific and engineering problems VI. Solve simple numerical problems by using built-in and script functions VII. Prepare scientific report

Textbook	Introduction to Matlab 7 for Engineers William J. Palm, Mc Graw Hill, 2004

Other References	

Homework & Projects	1. Variables, plotting, simple calculations 2. Algorithms 3. Iterative Methods 4. Root findings 5. Curve fitting/Interpolation 6. Numerical Integration The homeworks will be submitted in a report format.

Laboratory Work	Laboratory sessions will be based on the material covered in the lectures.

Computer Use	Computer use in this course is compulsory.

Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	30
	Quizzes		
	Homework	6	30
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	40

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Scientific and Engineering Computing	I
2	Introduction to Program Computing Environment	I,II
3	Variables, Operations and Simple Plot	II,V,VI,VII
4	Algorithms and Logic Operators	II,III,IV,VI,VII
5	Flow Control, Errors and Source of Errors	II-VII
6	Functions	II,IV,V,VI
7	Arrays	II,III,IV,VI
8	Solving of Simple Equations	II-VII
9	Polynomials Examples	II-VI
10	Applications of Curve Fitting	II-VII
11	Applications of Interpolation	II-VII
12	Applications of Numerical Integration	II,III,IV,VI,VII
13	Symbolic Mathematics	II,IV,VI
14	ODE Solutions with Built-in Functions	II,III,IV,VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			X
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

Course Name						
Environmental Chemistry						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
CEV 243E	6	3	5	3	-	-

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	95		5	

Course Description	Environment and environmental pollution, definition and types of waste, definition of waste parameters, processes utilized and chemicals used in textile industry, environmental pollution originating from textile industry, sample preparation, preservation and analysis techniques and equipments, waste water treatment equipments and analysis required for the control of the equipments. National and European regulations related to the subject.
Course Objectives	1. Environmental pollution, pollution factors, analysis techniques 2. Waste water systems, systems used for waste water in textile industry and required analysis techniques for system control.
Course Learning Outcomes	Students who pass the course will have: I. Knowledge on definition of environment, environmental pollution, classification, definition of toxicity, toxic materials II. Sampling, storage and analysis techniques for environmental pollution factors III. General information on waste disposal plants IV. Environmental pollution caused by textile sector, operation steps which cause pollution and chemicals used at these operation steps V. National and European regulations about environmental pollution factors in general and textile industry.
Textbook	Clescerl, L. S., Greenberg, A. E., Eaton, A. D., Standard Methods for the Examination of Water and Wastewater. A.P.H.A. Washington, 1992. Levin , M. A., Gealt, M. A., Biotreatment of Industrial and Hazardous Waste. McGraw-Hill Professional Publishing (1993)
Other References	--
Homework & Projects	2 homeworks, 1 term paper
Laboratory Work	--
Computer Use	--
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	40
	Quizzes	-	-
	Homework	2	10
	Projects		
	Term Paper/Project	1	10
	Laboratory Work		
	Other Activities		
	Final Exam	1	40

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Environment and definition of environmental polluters	I
2	Pollution and classification of polluters	I
3	Air, water an soil pollution	I
4	Thermal pollution, odor, nosie pollution, radioactive pollution	I
5	Definition of pollution parameters	I, II
6	Processes and chemicals in textile industry	IV
7	Environmental pollution originating from textile industry	IV
8	Sampling and sample preservation	II
9	Analysis equipment	II
10	Waste water treatment equipment	III
11	Analysis required for the control of the equipment	III
12	Related regulations on Environmetal Pollution	V
13	Potential situation in the conformity process to the European Union	V
14	Potential situation in the conformity process to the European Union	V

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			X
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	Date	Signature

İTÜ
COURSE SYLLABUS FORM

Dersin Adı (Course Title)	Akademik Danışmanlık (Academic Advising)					
				Ders Uygulaması, Saat/Hafta (Course Implementation, Hours/Week)		
Kodu (Code)	Semester (Semester)	Kredisi (Local Credits)	AKTS Kredisi (ECTS Credits)	Ders (Theoretical)	Uygulama (Tutorial)	Laboratuar (Laboratory)
DAN101	1	1	1	0	2	0
Bölüm/Program (Department/Program)	Bütün Programlar (All programs)					
Dersin Türü (Course Type)	Zorunlu (Compulsory)		Dersin Dili (Course Language)		Türkçe (Turkish)	
Dersin Önkoşulları (Course Prerequisites)	Yok (None)					

Dersin Tanımı **(Course Description)**	Akademik danışmanlık, lisans öğrenimine anlam ve amaç getirmeye yardımcı olan bir eğitim sürecidir. Yol boyunca, akademik başarı ve yaşam boyu öğrenmeye ilişkin entellektüel ve kişisel gelişimi besler. İTÜ'de akademik danışmanlık, öğrencilerin eğitim, kişisel ve kariyer hedeflerine ulaşmalarına yardımcı olabilecek, akademik başarı için gereken becerilerin kazanılmasını sağlayacak ve kurumun sunduğu çeşitli kaynak ve hizmetlere nasıl erişilebileceğini öğrenme, bir veya daha fazla akademik danışmanla ilişki kurma fırsatı sunar.
	Academic advising is a training/education process that helps to bring meaning and purpose to undergraduate study. Through the undergraduate study, it provides intellectual and personal development of academic achievement and lifelong learning. Academic advising in ITU provides opportunities for students to gain access to education, personal and career goals, realize the abilities needed for academic success, learn how to access the countless resources and services offered by the institution, and establish relationships with one or more academic advisers.

	Faaliyetler (Activities)	Değerlendirmedeki Katkısı, % (Effects on Grading, %)	Sene sonu başarı notu* (Letter grades)*
Başarı Değerlendirme Sistemi **(Assessment Criteria)**	Derse katılım (Attendance)	100 (100)	Başarılı : AA Başarısız : VF (Pass : AA) (Fail: VF)

* Minimum katılım gerekliliğini yerine getirenler sene sonu başarı notu olarak AA ile ve bu gereklilığ yerine getirmeyenler sene sonu başarı notu olarak VF ile değerlendirilir.

Note: See next page for a sample weekly course plan in 2019-20 Fall term

2019-20 Fall Term
DAN101 ACADEMIC ADVISING
PROGRAM*

Week	Maslak Campus (SDKM Conference Hall)	Maslak Campus (KSB-Grand Hall)	Taşkışla Campus (Hall No109)	Maçka Campus (Mustafa Kemal Lecture Hall)
1	Orientation by the Department / Program			
2	Student Clubs Union activity at Maslak Campus			
3	Meeting with academic advisors (in the department)			
4	**Session by OIDB** 1st group: 15:30-16:30 2nd group: 16:45-18:30	**Session by Erasmus Office** 1st group: 15:30-16:30 2nd group: 16:45-18:30	**Session on Mobbing**	**Session by PDR**
5	Meeting with academic advisors (in the department)			
6	Meeting with academic advisors (in the department)			
7	**Session by PDR**	**Session on Mobbing**	**Session on "How to study efficiently?" by Murat Günaydın**	**Session by OIDB** 1st group: 15:30-16:30 2nd group: 16:45-18:30
	Term Break			
8		**Session on "How to study efficiently?" by Murat Günaydın**	**Session by Erasmus Office**	**Session on Mobbing**
9	-	**Session by Carrier Center** 1st group: 15:30-16:30 2nd group: 16:45-18:30	-	**Session by Carrier Center** 1st group: 15:30-16:30 2nd group: 16:45-18:30
10	Meeting with academic advisors (in the department)			
11	Meeting with academic advisors (in the department)			
12	Meeting with academic advisors (in the department)			
13	Meeting with academic advisors (in the department)			
14	Meeting with academic advisors (in the department)			

DAN101 Academic Advising course and info on the ITU units* involved

Library	http://www.kutuphane.itu.edu.tr/	Orientation/training sessions are available by making an appointment from the given web-address
BIDB	http://bidb.itu.edu.tr/yeni-gelen-ogrenciler-icin-it-hizmetleri	Useful info are available in the documents accessible from the given web-page of the BIDB (Information Technologies Directorate)
KAUM	http://www.kaum.itu.edu.tr/tr/	"Prevention of sexual harassment and discrimination" Directive is accessible through the given web-page of KAUM (Women Studies Center). You may ask for info on mobbing or communicate your complaints to the unit by sending an e-mail to itucitak@itu.edu.tr
KB	https://kuluplerbirligi.itu.edu.tr/	KB (Student Clubs Union) runs an introduction activity for all students on the 2nd week of the Fall term: Maslak Campus, front-yard of the Central Lecture House. Those who cannot attend may make an appointment to receive further info on KB's activities.
PDR	http://pdr.itu.edu.tr/	PDR (Psychological Counseling and Guidance Center) makes presentations for all students. Those who cannot attend may check the presentations' handouts from the LMS (NINOVA)

Abbreviations:
OIDB: OSA- Office of Student Affairs / Registrar's Office, PDR: Psychological Counseling and Guidance Center, BIDB: Information Technologies Directorate, KAUM: Women Studies Center – in science, engineering and technology, KB: Student Clubs Union

İTÜ

COURSE SYLLABUS FORM

Kod (Code)	Ders Adı (Course Name)		Dili (Language)	Türü (Type)
DAN 301	Kariyer Danışmanlığı (Career Advising)		Türkçe (Turkish)	Zorunlu (Compulsory)

Kredi (Local Credits)	AKTS (ECTS)	Ders (Theoretical)	Uygulama (Tutorial)	Labaratuvar (Laboratory)
1	1	0	2	0

Dersin Önşartı ve Sınıf Kısıtı (Course Prerequisites and Class Restriction)	
Ders Önşartı (Prerequisites)	DAN101
Sınıf Kısıtı (Class Restriction)	3 veya 4. Sınıf / Junior or Senior Class

Ders Tanımı (Course Description)

Kariyer Danışmanlığı, lisans öğrencilerine programlarına özgün sektörel alanları ve kariyer fırsatlarını ayrıntılı olarak tanıtmaya yardımcı olan bir eğitim sürecidir. Yaşam tarzı, iş yeri ve kariyer planlaması arasındaki ilişkiler, ilgili sektörler ve endüstriden davetli konuşmacılar tarafından sunulmaktadır. Genel müdürler, yöneticiler ve karar vericiler, bilim insanları ve araştırmacılar, başarılı girişimciler, rol modelleri, insan kaynağı uzmanları, vb. profesyonellerden oluşan davetli konuşmacılar öğrencilere mesleki vizyon oluşturabilecek niteliktedir. İTÜ'de Kariyer Danışmanlığı, öğrencilerin kişisel ve kariyer hedeflerine ulaşmalarına yardımcı olabilme, gerekli becerilerinin kazanılmasını öğrenme ve bir veya daha fazla sektörel karar verici ile iletişim kurma fırsatı sunar.

Özgeçmiş belgesi geliştirmek, kapak mektupları yazmak, iş ilanları aramak, başarılı mülakatlar yapmak yoluyla iş dünyasına erişim; Kariyer gelişiminin ve kariyer seçiminin önemini anlama, Mesleki ve kariyer bilgisini bulma ve bunlara erişim, Teknolojinin rolü, Ağ oluşturma.

Career Advising is an educational process that helps undergraduate students to introduce their program's specific sectoral fields and career opportunities in detail. Interrelationships among lifestyle, work place, and career planning are presented by the invited speakers from the related sectors and industry. The invited speakers consisting of professionals such as CEOs, managers and decision makers, scientists and researchers, successful entrepreneurs, role models, human resource experts, etc. are capable of creating an occupational vision for students. Career Advising at ITU offers students the opportunity to help them achieve their personal and career goals, learn to gain the necessary skills, and communicate with one or more sectoral decision makers.

Accessing the world of work through developing resumes, writing cover letters, seeking job vacancies, successful interviewing; Understanding importance of career development and career choice, Locating and accessing occupational and career information, Role of technology, Networking.

İTÜ
COURSE SYLLABUS FORM

Course Name						
Economics						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
EKO201E	5	3	4	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100%

Course Description	Introduction to the principles of micro and macroeconomics, the fundamental problems of economies, the modeling of household and firm behaviors, market structures, the principles of public finance, the modeling of macroeconomics in an international context
Course Objectives	1.To teach students the basic principles of microeconomics 2.To present students the functioning of macroeconomics in relation to economic policymaking
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Understand the basic problems of the economy II. Be familiar with the tools of economic analysis III. Understand the decision making process of micro decision making units, household, firms IV. Understand the concepts of technology, production function, productivity, cost minimization and profit V. maximization VI. Understand the functioning of markets and various market structures VII. Understand the basic concepts and processes of macroeconomics VIII. Understand the link between the real and financial sectors IX. Evaluate the government, economic policies X. Understand the problems faced by open economies XI. 10. Build links between the economic analysis and the problems of globalized world, with a special reference to the developing countries, problems
Textbook	DAVID BEGG, STANLEY FISCHER AND RUDIGER DORNBUSCH, 2005, ECONOMICS, MCGRAW-HILL HIGHER EDUCATION, ISBN:0077107756.
Other References	HALIL SEYIDOĞLU, 2006, İKTİSAT BİLİMİNİN TEMELLERİ, GÜZEM CAN YAYINCILIK, ISBN:978975761614. TÜMAY ERTEK, 2008, MİKROEKONOMYE GİRİŞ, BETA BASIM YAYIM, ISBN:9752952534. TÜMAY ERTEK, 2008, MAKROEKONOMİYE GİRİŞ, BETA BASIM YAYIM, ISBN:978975295857.
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	40%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	What is economics? The tools of economic analysis, Government and mixed economy	I,II
2	Demand, Supply and Market, The elasticities of demand and supply, the effects of price and income over the demand	II,III
3	Consumer Choice Theory	III
4	Theory of supply: Cost and production	III,IV
5	Perfect competition and Monopoly	V
6	Market Structure and Imperfect Competition	V
7	Introduction to macroeconomics, Circular income flow diagram, Calculation of national income	VI
8	Aggregate demand; Fiscal policy and Foreign Trade	VI
9	Money and banking	VI
10	Central Bank and monetary system	VI,VII
11	Inflation	VII
12	Open Economy Macroeconomics	VIII,IX
13	International Monetary System and International Finance	IX
14	Recent developments in the Turkish Economy	X

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Essentials of Electrical Engineering						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
ELK 221E	6	3	4,5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering

Course Type	Compulsory	Course Language	English

Course Prerequisites	None

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
		70%	30%	

Course Description	Fundamentals of electrical engineering: electric circuits, circuit components and laws, analytic solution techniques, alternative current circuits, multi-phase systems, transient phenomena. Electronic circuits: diodes, transistors, operational amplifiers, digital electronics. Electrical machines: transformers, induction machines, synchronous machines, direct current machines

Course Objectives	1.To provide the non-electrical engineering student with a foundation for understanding the basic principles of electrical and electronic systems 2.To underline mutual concepts of electrical engineering and non-electrical engineering disciplines 3.To give the theoretical and practical electric knowledge

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. Electric knowledge, which is necessary for an engineer
	  II. Fundamentals of electric system security
	  III. Fundamentals of electric machinery security
	  IV. Novel electronic knowledge
	  V. Capability and to solve the problems about electric in non-electrical engineering disciplines

Textbook	Giorgio Rizzoni, 2008, Fundamentals of Electrical Engineering, McGraw-Hill Higher Education, ISBN:978007128338.

Other References	Ahmet Akhunlar, 1975, Elektroteknik, 4. Baskı, Ý.T.Ü. Allan R. Hambley, 2008, Electrical Engineering: Principles and Applications, Fourt, Prentice Hall Pearson Education.

Homework & Projects	All homework problems are to be handed in a week after they are assigned. Homework problems may be used as a source for exams

Laboratory Work	

Computer Use	Students can encouraged to use computer facilities in preparing their homeworks and from internet for the extraction of information

Other Activities	Two quizzes and one midterm exam will be given during the course. Quizzes can be given at any time in any week and the questions are of the subjects, which are discussed at that time or a week before.

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	30%
	Quizzes	2	12%
	Homework	2	8%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Electrical Engineering; Brief history and System of units	I
2	Fundamentals of Electric Circuits; Definitions and Laws	I
3	Resistive Network Analysis	I-V
4	Resistive Network Analysis (continued).	I-V
5	AC Network Analysis	I-V
6	AC Network Analysis (continued)	I-V
7	AC Power	I-V
8	Transient Analysis	I
9	Semiconductors and diodes .	IV,V
10	Transistors	IV,V
11	Operational amplifiers, Digital Systems	IV,V
12	Principles of Electromechanics; Laws, Transformers	III-V
13	Introduction to Electric Machines; Direct current Machine, Synchronous machine	III-V
14	Introduction to Electric Machines (continued); Induction motor, Residental wiring; Grounding and Safety	II-III-V

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	Date	Signature

İTÜ
COURSE SYLLABUS FORM

Course Name
Engineering Ethics

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	**Tutorial**	**Laboratory**
ETK 101E	8	1	2	1	0	0

Department/Program	Textile Engineering/ Textile Engineering	

Course Type	Compulsory	Course Language	English

Course Prerequisites	None

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100%

Course Description	Philosophical and ethical concepts, General moral principles, Human rights,Basic concepts of moral philosophy, Ethical theories, Historical development of engineering ethics, Engineering ethics codes, Ethics in design engineering, Choices and ethics in engineering profession, engineering ethics principles. Ethics in the field of engineering, Corporate ethics, management ethics, ethics and globalization, honesty and responsibility in engineering, product liability,Informed consent in engineering , Ethical approach to the solution of conflicts, Compromise, Negotiation strategies, Engineering and environment.

Course Objectives	1.To teach the students, the importance of responsibility of the tasks they will undertake during their working life after graduation 2.As educated part of the society, to direct students to reflect thei citizenship awareness to their working habits. 3.To educate graduates who have acquired knowladge to solve the ethical problems encountered in technological and scietific developments.

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. Will have a professional understanding
	  II. Will have prudent decision-making skills through the use of technical and social dimensions.
	  III. Will gain objective thinking ability .
	  IV. Will be sensitive to the solution of the problems at global and national levels.
	  V. Will use technical infrastructure in a way that the society can be directed and can be adapted to the service of contemporary society.
	  VI. Will gain the ability of discussing job-related issues and will gain multi-faceted thinking skills.

Textbook	Mike W. Martin & Roland Sclinzinger, 1989, Ethics in Engineering, McGraww-Hill.

Other References	C.Whitbeck, 1998, Ethics in Engineering Practice and Research, Cambridge University Press. Carl Mitcham & R. Shannon Duval, 2000, Engineering Ethics, Prentice Hall, ISBN:0-8053-6436-.

Homework & Projects	At least one assignment,that contain the presentation of an engineering case and its assessment from an ethical perspective, will be prepared.

Laboratory Work	

Computer Use	Internet can be used for literature survey.

Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	25%
	Quizzes		
	Homework	1	25%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Philosophical and ethical concepts, General moral principles	III
2	Enlightenment and freedom, Human rights	I
3	Basic concepts of moral philosophy, Ethical theories	III
4	Historical development of engineering ethic , Engineering ethics codes, Ethics in design engineering	I
5	Choices and ethics in engineering profession	VI
6	Science ethics	I
7	Ethics in the field of engineering	II
8	Corporate ethics, management ethics	VI
9	Ethics and globalization	IV
10	Honesty and responsibility in engineering	V
11	Product liability,Informed consent in engineering	I
12	Ethical approach to the solution of conflict	II
13	Compromise, Negotiation strategies	VI
14	Engineering and environment	IV

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.			
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			X
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.			X
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name
Physics I

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	**Tutorial**	**Laboratory**
FIZ 101E	1	3	4,5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering	
Course Type	Compulsory	**Course Language** English
Course Prerequisites	None	

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100 %			

Course Description	Vectors. Motion in one and two dimensions. Newton's laws and its applications. Work and energy. Conservation of mechanical energy. Momentum and motion of systems. Static equilibrium of rigid bodies. Rotation and angular momentum. Newton's law universal gravitation.
Course Objectives	1.to be able to write equations of motion for simple mechanical systems, and to integrate these equations 2.In cases where direct integration is not feasible, students are expected to make predictions based on conservation laws

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. Basic operation with vectors(addition , scalar and vectorial product)
	  II. Kinematics in one and two dimesions
	  III. Application of Newton's laws to fundemental problems of mechanics
	  IV. Concept of conservative force
	  V. Mechanics of rigid bodies rotating about a fix a axis and gyroscope motion
	  VI. Using conservation laws when direct integration of motion is not feasible
	  VII. Basic applications of Newton universal gravitation law

Textbook	W.E. GETTY ,KELLER MJ STOVE, 1993, FIZIK I, LITERATÜR YAYINCILIK, ISBN:975-7860-53-. HALLIDAY,D.,RESNICK,R.,WALKER,J., 1997, FUNDAMENTALS OF PHYSICS EXTENDED FIFTH EDITION, JOHN WILEY &SON, ISBN:0-471-10559-.
Other References	
Homework & Projects	Each Week 4 Problems Are Assigned From The Textbook. In The Final And Midterm Examinations One Question Is Chosen Among The Homework Problems.
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**
	Midterm Exams	2	60 %
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	40 %

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Vectors(addition of vectors, scalar product, vectorial product)	I
2	Motion in one and 2 dimesions:Properties of motion in one and two D. Uniform circular motion	II
3	Newton’s Laws: Newton law 1,2 and 3.	III
4	Application of Newton laws: Harmonic oscillator. Uniform circular motion.	III
5	Work and Energy	IV
6	Potential energy and conservation of energy: Conservative and no conservative forces	IV
7	Momentum and motion of system of particles: Center of. Motion of the center of mass	IV-VI
8	Momentum and motion of system of particle (second week)	IV-VI
9	Rotation 1 : Kinematic of rotation of rigid bodies. Moment of inertia	V
10	Rotation II: Angular momentum. Rotation of rigid bodies	V
11	Rotation II: Angular momentum. Rotation of rigid bodies. Gyroscopes	V
12	Static Equilibrium of Rigid Bodies: Torque. Conditions for equilibrium	V
13	Newton's universal gravitation law	VII
14	Problem session	V-VI-VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Physics I Laboratory						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
FIZ 101EL	1	1	1,5	0	0	2

Department/Program	Textile Engineering/ Textile Engineering		

Course Type	Compulsory	Course Language	English

Course Prerequisites	None

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	100 %			

Course Description	Basic measurement. Motion with constant acceleration. Conservation of linear momentum. The equilibrium experiment. The friction experiment. Rotational dynamics. Simple harmonic motion. Projectile motion. Elastic and inelastic collisions. Moment of inertia. Centripetal acceleration. Physical pendulum.

Course Objectives	1.Basic measurements 2.Interpretation of physical experiments 3.Fitting physical parameters to the data obtained from experiments

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Basic measurements II. Statics III. Kinematics IV. Collisions V. Newton's second law VI. Dynamics of rotation

Textbook	W.E. GETTY ,KELLER MJ STOVE, 1995, FIZIK I (ÇEVIRI), LITERARÜR YAYÝNEVI, ISBN:975-7860-53-. HALLIDAY,D.,RESNICK,R., WALER,J., 1997, FUNDAMENTALS OF PHYSICS,EXTENDED FIFTH EDITION, JOHN WILEY&SON, ISBN:0-471-10559-.

Other References	

Homework & Projects	

Laboratory Work	11 Laboratory Sessions

Computer Use	

Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams		
	Quizzes	11	30 %
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work	11	70 %
	Other Activities		
	Final Exam		

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Basic measurements	I
2	Motion with constant acceleration	III
3	The equilibrium experiment	II
4	The friction experiment	V
5	Rotational dynamics	VI
6	Simple harmonic motion	V
7	Simple harmonic motion	III
8	Elastic and elastic collisions	IV
9	Elastic and elastic collisions	IV
10	Moment of inertia	VI
11	Moment of inertia	VI
12	Centripetal acceleration	III
13	Physical pendulum	VI
14	Physical pendulum	VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			X
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	FIZ 101E MIN DD		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	100%			

Course Description	Coulomb laws and electrical field. Gauss law. Electrical potential. Capacitance. Electrostatic energy and properties of insulators. Current and resistance. DC circuits. The magnetic field. Sources of magnetic field. Faradays law. Inductance. Magnetic field in the matter. Electro Magnetic oscillations and AC circuits. Maxwells equations and electromagnetic waves
Course Objectives	1.Within the frame of electrostatic to relate electromagnetic field to its sources 2.Maxwell's equations in the vacuum 3.Introduction to electomagnetic waves

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	    I. To relate static electrical field to a continuous or discreet charge distribution (Coulomb law)
	    II. Computation of electrical field using symmetries of charge distribution
	    III. Energy of static electrical field. Electrical potential
	    IV. Electrical current and application of Ohm law
	    V. The effect of magnetic field on moving charge and to relate static magnetic field to its sources
	    VI. Maxwell's laws in the vacuum and alternative current
	    VII. Electromagnetic waves

Textbook	Young, H.D., Freedman, R.A., 2008, Sears and Zemansky University Physics, Pearson Addison Wesley, ISBN:0-321-50130-. Getty,W.E.,Kelller,M.J,Stove, 1993, Fizik II, Literatür yayıncılık, ISBN:975-7860-530.
Other References	
Homework & Projects	Each week 4 problems are assigned from the textbook. In the final and midterm examinations one question is chosen among the homework problems
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	60%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	40%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Electrical field	I
2	Electrical field (second week)	I
3	Gauss law	II
4	Electrical potential	III
5	Capacitance and dielectrics	III
6	Electrical current	IV
7	DC circuits	IV
8	The effects of magnetic field	V
9	The production of magnetic field	V
10	Faradays law	VI
11	Inductance and oscillations in LC circuit	VI
12	Alternative current	VI
13	Electromagnetic waves	VII
14	Problem session	V-VI-VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Physics II Laboratory						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
FIZ 102EL	2	1	1	0	0	2

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	FIZ 101EL MIN DD AND FIZ 101E MIN DD		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	100%			

Course Description	Fundamental measurements and Ohm's law. Oscilloscope and signal generator. Electric field and lines. Kirchoff's law and Wheatstone bridge. Transient currents. Charging and discharging of capacitors. RC circuits. Determination of electron e/m ratio. Transformers
Course Objectives	1.Basic measurements 2.Interpretation of physical experiments 3.Fitting physical parameters to the data obtained from experiments
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Electrostatic II. D.C circuits III. Transient current IV. A.C. current circuits V. Effect of magnetic field of electrical charges
Textbook	Young, H.,D., Freedman, R.,A., 2008, Sears and Zemansky University Physics, Pearson Addison Wesley, ISBN:0-321-50130-. Getty,W.,E., Keller, M.J,Stove, 1993, Fizik II (Çeviri), Literatür yayýncýlýk, ISBN:975-7860-530
Other References	
Homework & Projects	
Laboratory Work	8 Laboratory sessions
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams		
	Quizzes	8	30%
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work	9	70%
	Other Activities		
	Final Exam		

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Basic measurements and Ohm's law	I
2	Oscilloscope and signal generator	II
3	Electrical field lines	I
4	Electrical field lines	I
5	Kirchoffs law and Wheatstone bridge	II
6	Kirchoffs law and Wheatstone bridge	II
7	Transient currents and RC circuits	III
8	Transient currents and RC circuits	III
9	RL circuits	IV
10	RL circuits	IV
11	Determination of electron´s e/m ratio	V
12	Determination of electron´s e/m ratio	V
13	Transformers	IV
14	Transformers	IV

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			X
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name
Labor Law

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	**Tutorial**	**Laboratory**

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100

Course Description	Introduction to law: Definition, historical development, characteristics, sources. Basic concepts of employment law, employee, employer, employer representative, workplace. Individual employment law: individual employment relationships, contract of employment, the types of employment contract. Duties arising from employment contract , employee duty to work, obligation to obey the orders of the employer, duty of loyalty, employer duty to pay wage, duty to protect the employee, to treat employees equally. The end of employment contract, termination of employment contract, job security, severance pay.
Course Objectives	1.To provide the basic concepts of the law, the sources of the law and labour law 2.To provide the legal framework of employee and employer relations 3.To provide the definition of, forms of the employment contract, concluding and ending of the employment contract 4.To provide the definition of the employee and the rights and duties of the employees 5.To provide the definition of the employer and the rights and duties of the employers

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. will learn the basic concepts of the law
	  II. will learn the sources of the law
	  III. will learn the basic concepts of the labor law
	  IV. will learn the legal framework of the working life and employee and employer relations
	  V. will learn the rights and obligations of the individuals in general and in the working life
	  VI. determine the conditions of termination of labor contract and consequences thereof.

Textbook	Ö.Eyrenci-S.Taşkent-D.Ulucan, 2006, Bireysel İş Hukuku, Legal Yayinevi, Isbn:975-8654-32-. Prof.Dr.Savaş Taşkent, 2007, İşletme Hukuku, Legal Yayinevi, Isbn:978994494145.
Other References	
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to law	I,II
2	Definitions, historical development, characteristics, sources of law	III
3	Basic concepts of employment law, employee, employer, employer representative, workplace	III
4	Individual employment relationships, contract of employment	III
5	The types of employment contracts	III
6	Duties arising from employment contract: employee duty to work	V
7	Employee obligation to obey the orders of the employer, employee duty of loyalty	V
8	Employer duty to pay wage, forms of remuneration	V
9	Duty to protect the employee, to treat employees equally	V
10	The end of employment contract: The ending by means other than termination and suspension	IV-VI
11	Termination of employment contract: termination by means of respecting a term of notice	IV-VI
12	Termination by means of respecting a term of notice, job security	IV-VI
13	Termination of employment contract: without notice	IV-VI
14	Legal consequences of ending the employment contract and severance pay	VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name						
English I						

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
ING 112	1-2	3	3.5	3	-	-

Department/Program	Common Pool		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	Passing the ITU School of Foreign Languages English Preparatory School Proficiency Exam with 60-84		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100%

Course Description	The students of English 112 course improve their efficient reading techniques, learn to analyze outside sources and elicit proper information, develop their critical thinking skills and go through the processes of reading and analyzing texts, planning, drafting and editing. Students working on text exploration and academic writing simultaneously produce argumentative essay both in their homework assignments and their exams. Besides, they participate in the in-class discussions of the reading materials.
Course Objectives	This course aims to enhance students' reading and writing skills simultaneously; reinforces students' perception of the reading-writing link, enabling them to decipher academic texts more efficiently; teaches them to write academic essays in terms of both content and organization. **Reading skills:** 1. Speed/timed reading, 2. Identifying the main points, 3. Analyzing the view and the tone of the text, 4. Finding and interrelating relevant information, 5. Distinguishing between general and specific information, , 6. Identifying for and against points and eliciting arguments, 7. Eliciting topic related/key words, 8. Enhancing academic vocabulary **Writing skills:** 1. Note taking, 2. Summarizing, 3. Organizing ideas and grouping them 4. Outlining, 5. Writing thesis statements and topic sentences, , 6. Writing argumentative essays following a certain format, 7. Supporting the main points in the essay with findings from outside sources, 8. Using academic tone, genre language and appropriate transition signals. **Speaking Skills:** 1. Carrying out in-class group work 2. Convening for brainstorming about a certain topic 3. Participating in a debate on a certain topic
Course Learning Outcomes	Students who pass the course satisfactorily can: 1. Identify the main points and analyze the view and the tone of the text 2. Elicit relevant information from an outside source to support their ideas 3. Follow the academic writing rules and support their ideas in their writing via referring to an outside source 4. Organize a piece of academic writing (thesis statement, body paragraphs, etc.) and prepare an outline 5. Organize and carry on debates on controversial topics 6. Use the relevant vocabulary and structures related to argumentative genre 7. Write an argumentative essay on a certain topic 8. Evaluate an academic text
Textbook	Academic Writing Framework
Other References	
Homework & Projects	HOMEWORK: Students read about a controversial topic, plan/outline, write an argumentative essay, do self-evaluation and peer-checking.
Laboratory Work	None
Computer Use	1. Students submit all their homework as computer printouts 2. They may refer to the websites to find sources 3. During the conduct of the lesson, computers are used for PowerPoint presentations.
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams		30%
	Quizzes	1	10%
	Homework	1	20%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	40%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to course, explanation of course objectives, speed reading exercises	1
2	Reading and analyzing various texts, making use of information in texts, basic citation rules and plagiarism, in-class discussions on eliticing info	1-2-3
3	Incorporating information taken from an outside source into a paragraph; simple citation rules, in-class discussions on eliticing info	1-2-3
4	Incorporating information taken from an outside source into a paragraph; simple citation rules, in-class discussions on eliticing info	1-2-3
5	Interpretation of graphs & charts and using them in writing, in-class discussions on eliticing info	4-5
6	Interpretation of graphs & charts and using them in writing, in-class discussions on eliticing info	1-2-4
7	Writing sentence definitions on technical subjects	2-3-4-5
8	Revision	2-3-4-5
9	Working on essay writing: content, organization, structure, language; Introduction to argumentative essay, reading and analyzing texts on controversial issues, content and organization	1-2-6-7
10	Class debate, reading	1-2-6-7
11	Writing argumentative essay, discussing texts on a controversial issue, learning language of discussion, exercise on cons and pros of a topic	1-2-6-7
12	Argumentative essay: outlining and writing introduction and conclusion paragraphs, in-class evaluation	1-2-3-6-7-8
13	Argumentative essay: outlining and writing body paragraphs, in-class evaluation	1-2-3-6-7-8
14	Revision and final exam practice	9

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Prepared by	*Date*	*Signature*

İTÜ
COURSE SYLLABUS FORM

Course Name
English III

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
ING201	3	3	3,5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering	
Course Type	Compulsory	Course Language	English

Course Prerequisites	ING 102 MIN DD AND (ING 101 MIN DD OR ING 103A MIN DD OR ING 103B MIN DD OR ING 103C MIN DD OR ING 103D MIN DD OR ING 103E MIN DD OR ING 103F MIN DD OR ING 103G MIN DD OR ING 103H MIN DD OR ING 103I MIN DD OR ING 103J MIN DD OR ING 103K MIN DD OR ING 103L MIN DD OR ING 103M MIN DD OR ING 103N MIN DD OR ING 103O MIN DD OR ING 103P MIN DD OR ING 103 MIN DD OR ING 103R MIN DD OR ING 103T MIN DD OR ING 103U MIN DD OR ING 103V MIN DD OR ING 103Y MIN DD OR ING 103Z MIN DD OR ING 103X MIN DD OR ING 103AA MIN DD OR ING 103AB MIN DD OR ING 103AC MIN DD OR ING 103S MIN DD OR ING 103W MIN DD OR ING 101R MIN DD OR ING 101S MIN DD OR ING 103AD MIN DD)

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
				100%

Course Description	English 201 is a course designed to teach the organizational and critical thinking skills necessary for logical written expression. The course teaches skills including library research, choice of topic, construction and defense of a thesis statement, citing sources, outlining, organizing a References page and note taking. Critical elements of the course are instruction in paraphrasing and summarizing techniques, use of quotations and the avoidance of plagiarism.

Course Objectives	1.Improve students reading and writing skills 2.Improve students technical vocabulary 3.Enhance knowledge about a specific subject related to their department 4.Enable awareness and application of the research process conforming to the conventions of academic life

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Do extensive library research to select suitable, relevant and reliable sources related to the topic they have chosen, develop an argument and construct an argumentative thesis statement. II. Identify different kinds of sources and organize findings from a variety of wellchosen sources in the form of an outline. III. Document source information by correctly applying APA style citations & references. IV. Locate, evaluate, interpret and synthesize source information for the defense of the thesis. V. Perform extensive note taking with the correct application of paraphrases, summaries & quotations. VI. Draw personal conclusions, make deductions and form comments based on the research findings. VII. Prepare an argumentative research paper of at least 1500 words, in APA style and defend it orally.

Textbook	DILEK V. TAVAŞOĞLU, SUZAN ARIMAN & SÜEDA ALBAYRAK, 2008, WRITING RESEARCH PAPERS, İTÜ VAKFI YAYINLARI, ISBN:978975746318.
Other References	
Homework & Projects	The Course Is Assignment Based, Therefore Assessment Is Made According To Weekly Homework Leading Up To The Final Paper.
Laboratory Work	
Computer Use	All Assignments Are Type Written On The Computer, Printouts Submitted And There Is Extensive Use Of The Internet For Research Purposes
Other Activities	Oral Presentation

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams		
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project	6	65%
	Laboratory Work		
	Other Activities	1	10%
	Final Exam	1	25%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	General information about the course (process, rules, grading, format), definition of a research paper, examples from the book, finding a topic	I
2	Narrowing down a general topic, developing an argument, sources, writing a thesis statement	I
3	Source selection, different types of sources	II
4	Preparing an outline based on research findings	II
5	Writing citations APA style	III
6	Writing references APA style	III
7	Use of sources and Note taking techniques	IV
8	Note taking and paragraph writing using paraphrases, summaries and quotations	IV,V
9	Note taking and paragraph writing using paraphrases, summaries and quotations	IV,V
10	Note taking and paragraph writing using paraphrases, summaries and quotations	IV,V
11	Revising all the paragraphs, making comments, adding information where necessary	VI
12	Writing the introduction, conclusion	VI
13	Preparing the final paper, the paper format, preparing the database documents, oral exam study	VII
14	Final paper submission and oral exam	VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
General Chemistry I						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
KIM101E	1	3	4.5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering

Course Type	Compulsory	**Course Language**	English

Course Prerequisites	

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100 %			

Course Description	The scope of chemistry and stoichiometry, atoms and the atomic theories, the periodic table and some atomic properties, chemical bonding, molecular geometry, gases and gas laws, liquids, solids, solutions and their physical properties, thermochemistry, principles of chemical equilibrium, acids and bases, thermodynamic.

Course Objectives	1.To teach the basic concepts and principles of chemistry. 2.To provide the theoretical and practical knowledge together. 3.To improve the ability of problem solving skill and to make critical decisions. 4.To give the importance of chemistry on the daily life. 5.To help the students thinking positively, logical and to understand the principles of nature.

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	I. will be able to identify and apply atomic theories and useful relationships from the periodic table,
	II. Make calculations with using stochiometry in chemical reactions,
	III. Solve different problems about liquid solutions and gases,
	IV. Make applications about heat, work, enthalpy and internal energy,
	V. Set up the three dimensional shape of molecular compounds with using their chemical bonding knowledge and some other bond theories.
	VI. Show the crystal structures of solids and skills to solve related problems,
	VII. Solve problems about thermodynamic, chemical equilibrium, acid and base concepts and concentration,
	VIII. Integrate their chemistry knowledge to their daily life with the real-world examples (examples relevant to the biological sciences, engineering and the environmental sciences)

Textbook	R.H. Petrucci, W.S. Harwood, F.G. Herring, J.F. Madura,, 2007, General Chemistry, Principles and Modern Applications, Pearson Prentice Hall, ISBN:0-13-198825-.

Other References	N.J.Tro, 2008, Chemistry-A Molecular Approach, Pearson Prentice Hall, ISBN:0-13-233250-. T.L. Brown, H.E. LeMay, B.E.Bursten, C.J. Murphy, 2009, Chemistry-The Central Science, Pearson Prentice Hall, ISBN:0-13-235849-.

Homework & Projects	All homework problems are to be handed in a week after they are assigned. Homework problems may be used as a source for exams.

Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**
	Midterm Exams	2	50 %
	Quizzes		
	Homework	5	6 %
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	44 %

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Properties of Matter and Electronic Structure of Atom	I
2	Periodic Table and Chemical Compounds	I
3	Chemical Reactions and Reactions in Aqueous Solutions	II
4	Gases	II, III
5	Thermochemistry	IV
6	Chemical Bonding I	V
7	Chemical Bonding II	V
8	Liquids, Solids and Intermolecular Forces I	III,IV,V
9	Liquids, Solids and Intermolecular Forces II	VI
10	Solutions and Their Physical Properties	III,IV,V,VI
11	Chemical Equilibrium	VII
12	Acids and Bases	VII
13	Acids and Bases	VII
14	Thermodynamic	VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			X
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
General Chemistry I Laboratory						

				Course Implementation, Hours/Week		
				Theoretical	**Tutorial**	**Laboratory**
Code	**Semester**	**Local Credits**	**ECTS Credits**			
KIM 101EL	1	1	1.5	0	0	2

Department/Program	Textile Engineering/ Textile Engineering		

Course Type	Compulsory	**Course Language**	English

Course Prerequisites	

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100 %			

Course Description	General Chemistry laboratory course has the largest number of students of any of the laboratory classes in the chemistry curriculum. It serves to introduce thousands of science and engineering students to the field of chemistry. It covers basic chemical concepts given in General Chemistry. In this course, General Chemistry students are exposed to the traditional emphasis on chemical compounds, solutions, stoichiometry, separation techniques, hardness of water, synthesis of soap and electrolytes. Individual experiment times range from 30 mins to 2 hrs.

Course Objectives	1.To gain ability of doing chemistry experiments under the safe conditions, 2.Learning chemistry knowledge with the experiments, 3.Applying basic techniques and using instruments, 4.Writing scientific reports, 5.Understanding the relationship between daily life and chemicals.

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. will gain a knowledge about anions and cations with some color and precipitation reactions. II. will know which ions are responsible about hardness of water and how to calculate it. III. will be able to make a soap with a simple experiment. IV. will gain a knowledge about iodimetry. V. will be able to know how to determine pH of a solution with three different methods. VI. 6. will have a knowledge about electrolytes and some of their properties and writing scientific reports.

Textbook	A. B. Soydan, G. Koza, N. Tan, Ü. Tunca, 2003, Genel Kimya Laboratuar Kitabı, Alfa yayimcilik, ISBN:975-297-379-.
Other References	
Homework & Projects	
Laboratory Work	Individual experiment times range from 30 mins to 2 hrs
Computer Use	
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**
	Midterm Exams		
	Quizzes	7	20 %
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work	7	20 %
	Other Activities	7	20 %
	Final Exam	1	40 %

COURSE PLAN

Weeks	Topics	Course Outcomes
1	The Identification Reactions of Anions	I
2	The Identification Reactions of Anions	I
3	The Identification Reactions of Cations	I
4	The Identification Reactions of Cations	I
5	Determination and Removal of Hardness of Water	II
6	Determination and Removal of Hardness of Water	II
7	Synthesis and Features of Soap	III
8	Synthesis and Features of Soap	III
9	Iodimetry	IV
10	Iodimetry	IV
11	Determination of pH with Colorimetric Method	V
12	Determination of pH with Colorimetric Method	V
13	Determination of Dissociation Constant of a Weak Electrolyte	VI
14	Determination of Dissociation Constant of a Weak Electrolyte	VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.			X
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Organic Chemistry						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
KIM 205E	2	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		

Course Type	Compulsory	**Course Language**	English

Course Prerequisites	KIM 101E MIN FF

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100%			

Course Description	The scope of organic chemistry and atomic properties of carbon, chemical bonding, hybrid orbitals, aliphatic hydrocarbons (alkane,cycloalkane), alkenes,alkyns, halojenated compounds, alcohols, diols, ethers, aromatic compounds, aldehyde, ketone, carboxylic acids and derivatives, amines, carbonhydrates, Lipids, amino acids, proteins and polymers

Course Objectives	1.To teach the basic concepts and principles of organic chemistry. 2.To provide the theoretical and practical knowledge together 3.To improve the ability of organic problem solving and to decide critical decisions 4.To give the importance of organic chemistry on the daily life. 5.To help the students looking at different angel and aspect of organic chemistry problems and to understand the importance of organic chemistry for education of engineering.

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. To learn and apply the basic concepts and principles of organic chemistry II. To provide and apply the theoretical and practical knowledge together III. To improve and solve the ability of organic problem solving and to decide critical decisions IV. To learn and apply the importance of organic chemistry on the daily life. V. To help the students thinking positively, logical and to understand the importance of organic chemistry for engineering. VI. To apply and production, theoretical organic knowledge at laboratory and industry VII. To make production with industrial scale from laboratory scale

Textbook	T.W.Graham Solomons and Craigh B. Fryhle, 2004, Organic Chemistry, John Wiley and Sons, ISBN:0-471-41799-. Paula Yurkanis Bruice, 2001, Organic Chemistry, Prentice-Hall, Inc. Pearson Education, ISBN:0-13-017858-.
Other References	L.G.Wade Jr., 2003, Organic Chemistry, Prentice-Hall, Inc. Pearson Education, ISBN:0-13-033832-.
Homework & Projects	special topics
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	50%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Chemical bonding, carbon atom and hybrid orbitals.	I
2	Aliphatic hydrocarbons (Alkanes and cycloalkanes)	I
3	Alkenes	II
4	Alkynes	II-III
5	Compounds with halogen	IV
6	Alcohols, diols and ethers	V
7	Aldehydes and ketones	V
8	Aldehydes and ketones	III-V
9	Carboxylic acids and their derivatives	III-V
10	Amines	III-V
11	Aromatic compounds I	VI
12	Aromatic compounds II	VI
13	Carbonhydrates,Lipids, amino acids, proteins	VI
14	Polymers	I-VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	*Tarih (Date)*	*İmza (Signature)*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Introduction to Polymer Chemistry						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
KIM 210E	4	3	4	3	0	0

Department/Program	Textile Engineering/ Textile Engineering			
Course Type	Elective		**Course Language**	English
Course Prerequisites	KIM 231 MIN DD or KIM 231E MIN DD or KIM 104 MIN DD or KIM 104E MIN DD or KIM 205 MIN DD or KIM 205E MIN DD or KIM 303 MIN DD or KIM 303E MIN DD			

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100%			

Course Description	History of polymers, fundamental definitions molecular weights, thermal properties condensation polymerization free-radical polymerization addition polymerization ionic polymerization cationic polymerization anionic polymerization copolymerization ring opening polymerization polymerization systems

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.		X	
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	_Tarih (Date)_	_İmza (Signature)_

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COURSE SYLLABUS FORM

Course Name						
System Dynamics and Control						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MAK 331E	6	3	4	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		

Course Type	Compulsory	**Course Language**	English

Course Prerequisites	MAT 201 veya MAK 201E

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	20%	40%	40%	

Course Description	Introduction to system dynamics and control, Transfer function of linear systems. Linearization, Transient response analysis, Stability analysis, Basic control algorithms and structures, PID tuning methods, Frequency response analysis, Basic controller design methods and examples.
Course Objectives	1.To provide basic knowledge on system dynamics and automatic control to mechanical engineering students 2.To introduce basic controller design methods with a curriculum enriched by application examples

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. Learn general knowledge on control system structure
	  II. Modeling and analysis of dynamical systems
	  III. Transient response analysis of linear systems
	  IV. Application of basic control algorithms and PID tuning methods
	  V. Stability analysis of the system
	  VI. Learn basic design methods of frequency response
	  VII. Set up controller design experience based on industrial application examples

Textbook	Richard C. Dorf, Robert H. Bishop, 1998, Modern Control Systems, Addison Wesley.
Other References	Katsuhiko Ogata, 1997, Modern Control Engineering, Prentice Hall. Norman S. Nise, 2000, Control Systems Engineering, John Wiley&Sons, Inc.. Benjamin C. Kuo, Farid Golnaraghi, 1991, Automatic Control Systems, John Wiley&Sons, Inc.. Franklin Powell, Emami Naeimi, 1991, Feedback Control of Dynamics Systems, Addison Wesley. N. Özdaþ, T. Dinibütün, A. Kuzucu, 1998, Otomatik Kontrol Temelleri, Birsen.
Homework & Projects	All homework problems are to be handed in a week after they are assigned. Homework problems may be used as a source for exams.
Laboratory Work	
Computer Use	MATLAB
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	40%
	Quizzes		
	Homework	4	10%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Automatic Control	I
2	System Dynamics, Electrical, Mechanical, Thermal and Fluid Systems	II
3	Laplace Transforms	II
4	Differential Equation Solution and Linearization	II
5	Transfer Function of Linear Systems	III
6	Block Diagrams and State Space Model	III
7	Transient Response, First and Second Order Systems	III
8	Feedback, Basic Control Actions, P, PI, PD, PID Control	IV
9	Feedback, Basic Control Actions, P, PI, PD, PID Control	IV
10	Control System Performance, PID Tuning Methods	IV
11	Stability, Routh Method	V
12	Frequency Response Analysis	VI
13	Frequency Response Analysis	VI
14	Controller Design experience based on industrial applications	VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.		X	
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Material Science						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MAL201E	4	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites			

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	20%	50%	30%	0

Course Description	Introduction to materials science and classification of atomic structures of the materials. Crystal structures and imperfections. Mechanical and physical properties of the engineering materials. Solid state diffusion. Phase diagrams and solidification. Ferrous / nonferrous alloys and heat treatment. Electrical, optical, thermal and magnetic properties associated with electron band structures of the materials. Metallic corrosion and prevention from corrosion.

Course Objectives	1.To give an understanding on the importance of materials science for engineering applications 2.To teach the properties, structure and production processes of materials and to make the students understand the strong relations between them 3.To give an understanding on the material selection and design using material science knowledge

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Understand the relations between the chemical composition, atomic bonding and the properties of materials II. Understand the ordered and disordered crystal structures and the differences between them and define Bravais lattices and Miller indices III. Understand the effects of crystal defects on material properties and the test methods for the determination of mechanical properties. IV. Understand the diffusion concept and laws and its effects on material properties. V. Understand the importance of phase concept and phase diagrams, and use them VI. Classify ferrous and non-ferrous alloy systems and understand the properties of polymeric and ceramic materials. VII. Understand the strengthening mechanisms of materials, phase transformations and heat treatments VIII. Understand the relations between the electrical, thermal conductivity, optical properties and material structure IX. Define magnetic, dielectric, semi conductor and conductor materials and interrelate them with the structure of X. materials. XI. Understand the importance of corrosion and prevention methods

Textbook	D.R. ASKELAND, 1994, THE SCIENCE AND ENGINEERING OF MATERIALS, PWS PUB. CO., ISBN:0534934234. W.D. CALLISTER JR., 2003, MATERIALS SCIENCE AND ENGINEERING AN INTRODUCTION, JOHN WILEY&SONS, ISBN:978047113576. J. F. SHACKELFORD, 1999, INTRODUCTION TO MATERIALS SCIENCE FOR ENGINEERS, MCMILLAN PUB. CO., ISBN:978013011287.
Other References	B.S. MITCHELL, 2004, AN INTRODUCTION TO MATERIALS ENGINEERING AND SCIENCE FOR, JOHN WILEY&SONS, ISBN:0471436232. W.F. SMITH, 1996, PRINCIPLES OF MATERIALS SCIENCE AND ENGINEERING, MCGRAW HILL, ISBN:007100291.
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework	1	10%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Engineering Materials: Atomic structure and bondings	I
2	Crystalline materials, crystal structures, crystal imperfection and atomic movements in materials	II-III-IV
3	Mechanical properties of materials: tensile test, elastic, plastic deformation, fracture	III
4	Mechanical properties of materials: wear, fatigue, creep and hardness	III
5	Phase diagrams	V
6	Phase diagrams and solidification	V
7	Strengthening mechanisms: grain size, solid solution, dispersion, deformation strengthening	VII
8	Annealing, phase transformation and heat treatment	VII
9	Ferrous and Non-ferrous Alloys	VI
10	Ceramic, polymers, composite materials	VI
11	Electric, dielectric and thermal properties of materials	VIII-IX
12	Semiconducting and optical properties of materials	VIII-IX
13	Piezzoelectric and magnetic properties of materials	IX
14	Corrosion and prevention	X

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.			X
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		X	
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.		X	
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Mathematics I						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MAT103E	1	4	6	3	2	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites			

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100 %			

Course Description	Functions of a Single Variable, Limits and Continuity, Derivatives, Applications of Derivatives, Sketching Graphs of Functions, Asymptotes, Integration, Fundamental Theorem of Calculus, Applications of Integrals, Polar Coordinates, Transcendental Functions, Techniques of Integration, Indeterminate Forms, L'Hopital's Rule.
Course Objectives	1.To provide the concepts of functions, limits, continuity, differentiation and integration 2.To provide the knowledge of applications of differentiation and integration 3.To give an ability to apply knowledge of mathematics on engineering problems

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. Compute the limit of various functions, use the concepts of the continuity, use the rules of differentiation to differentiate functions
	  II. Sketch the graph of a function using asymptotes, critical points and the derivative test for increasing/decreasing and concavity properties.
	  III. Set up max/min problems and use differentiation to solve them
	  IV. Evaluate integrals by using the Fundamental Theorem of Calculus
	  V. Apply integration to compute areas and volumes , volumes of revolution and arclengths
	  VI. Learns transcendental functions and evaluate integrals using techniques of integration
	  VII. 7. Learns the indeterminate forms of limits and evaluates limits by using L'Hospital's rule

Textbook	G.B THOMAS, R. L. FINNEY, M.D.WEIR, F.R.GIORDANO, 2005, THOMAS' CALCULUS, 10TH EDITION, ADDISON WESLEY, ISBN:0201441411.
Other References	
Homework & Projects	ALL HOMEWORKS ARE TO BE HANDED IN A WEEK AFTER THEY ARE ASSIGNED. HOMEWORKS MAY BE USED AS A SOURCE FOR EXAMS.
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**
	Midterm Exams	1	40 %
	Quizzes		
	Homework	4	
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Limits and Continuity	I
2	Limits and Continuity	I
3	Derivatives	I
4	Derivatives	I
5	Applications of Derivatives	II
6	Applications of Derivatives	II-III
7	Integration	IV
8	Integration	IV
9	Applications of Integrals	IV
10	Applications of Integrals/Transcendental Functions	IV-V
11	Transcendental Functions	V
12	Techniques of Integration	V
13	Techniques of Integration	V
14	L'Hopital' s Rule	VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.		X	
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Mathematics II						

				Course Implementation, Hours/Week		
				Theoretical	**Tutorial**	**Laboratory**
Code	**Semester**	**Local Credits**	**ECTS Credits**			
MAT 104E	2	4	6,5	3	2	0

Department/Program	Textile Engineering/ Textile Engineering			
Course Type	Compulsory		**Course Language**	English
Course Prerequisites	MAT 103E MIN DD OR MAT 101E MIN DD			
Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	100 %			

Course Description	Functions of a Single Variable, Limits and Continuity, Derivatives, Applications of Derivatives, Sketching Improper integrals, Infinite sequences and series, Vectors in Space,Vector-Valued Functions, Multivariable Functions and Partial Derivatives , Multiple Integrals.
Course Objectives	1.To provide the concepts and applications of the convergence of improper integrals, sequences and infinite series. 2.To provide the knowledge of applications of partial differentiation and multiple integrals. 3.To give an ability to apply knowledge of mathematics on engineering problems.
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Compute limits of sequences and series; determine the convergence of the series and the radius of II. convergence of power series. III. Represent a known function as a Taylor series; approximate a known function with a Taylor polynomial IV. and determine the error involved. V. Compute the standard representation of a vector in 3-space, compute the dot product and cross product VI. of vectors; write equations of lines, planes and quadric surfaces in 3-space. VII. Use the concepts of continuity, differentiation, and integration of vector-valued functions. VIII. Understand the multivariable functions, analyze limits, determine continuity, and compute partial IX. derivatives of them; find tangent planes, directional derivatives. X. Apply the second partials test, and Lagrange multipliers to approximate and solve optimization problems. XI. Compute multiple integrals and apply them in problem situations involving area and volume.
Textbook	G.B Thomas, R. L. Finney, M.D.Weir, F.R.Giordano., 2005, Thomas' Calculus, 10th Edition., Addison Wesley, ISBN:0201441411.
Other References	
Homework & Projects	All homeworks are to be handed in a week after they are assigned. Homeworks may be used as a source for exams.
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40 %
	Quizzes		
	Homework	4	
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Improper Integrals	I
2	Sequences of numbers	I
3	Infinite Series	I
4	Infinite Series	I
5	Infinite Series	I
6	Infinite Series	II
7	Vectors in space	III
8	Vector valued functions	IV
9	Multivariable Functions and Partial Derivatives	V
10	Multivariable Functions and Partial Derivatives	V
11	Multivariable Functions and Partial Derivatives	V
12	Multivariable Functions and Partial Derivatives	VI
13	Multiple Integrals	VII
14	Multiple Integrals	VII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.		X	
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	*Tarih (Date)*	*İmza (Signature)*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Numerical Methods						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MAT 202E	4	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering			
Course Type	Compulsory		**Course Language**	English
Course Prerequisites	MAT 102E MIN DD OR MAT 104E MIN DD			

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	25%	25%		50%

Course Description	Description of Numerical Methods and application of them particularly in engineering. Error analyses in numerical methods, analitical solutions, numerical methods for the solution of systems (lineer and non linear), approximation methods, interpolation, linear regression, numerical integration.
Course Objectives	1.an introduction to the language, logic, and math of numerical methods as used in engineering and the sciences 2.an opportunity to learn how numerical analyses can be applied to a wide range of problems of importance in the sciences, industry, and society.
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. the fundamental knowledge of numerical methods, II. the ability to use the knowledge about numerical methods in analyzing a problem III. the ability to choose the right solution method for a particular event,
Textbook	James F. Epperson, 2001, An Introduction to Numerical Methods and Analyses,, John Wiley and Sons, ISBN:0471316474.
Other References	R. Tapramaz, 2002, Sayısal Çözümleme, Literatür yayıncılık, ISBN:0130126411. Nahit Kumbasar, 1992, Bilgisayar Programları ile Sayısal Hesap, TMMOB İnşaat Mühendisleri Odası Yayını. Curtis F. Gerald and Patrick O. Wheatley, 2004, 0-321-13304-8, Addison Wesley Publishing Company, ISBN:0-321-13304-. İ. uzun, 2004, 4. Nümerik Analiz, Beta yayınları, ISBN:9754869529. Chaapra, S., C., Canale, R., P., 2003, Mühendisler için sayısal yöntemler, Literatür Kitabevi, ISBN:0130126411.
Homework & Projects	1.Searching on a specific subject, writing a report which needed to use word processor and spreadsheat applications, 2.Sending/uploading a document via ftp/e-mail in a desired file format, 3.Solving a specific problem by using numerical methods.
Laboratory Work	
Computer Use	Homeworks should be presented.
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**	
	Midterm Exams	1	20%	
	Quizzes	1	12%	
	Homework	1	8%	
	Projects			
	Term Paper/Project			
	Laboratory Work			
	Other Activities			
	Final Exam	1	60%	

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction, Error in numerical analysis	I
2	Error analysis of functions, least square concepts in numerical methods	I,II
3	Solution of linear equations systems, Direct methods, Cramer Method, Gauss Elimination	I,II,III
4	Gauss Jordan, LU method	II, III
5	Doolittle Methods Cholesky Method	II,III
6	Jacobi Iterative Method	II,III
7	Gauss Siedel Iterative Method, Error Analysis of linear equations systems	II,III
8	Non linear equation systems, Root finding	II,III
9	Bisection and Newton Raphson Iteration Methods	II,III
10	Regula Falsi, Succesive Substitution Method	II,III
11	Approximation methods, Interpolation, Linear Regression, Interpolation Polynoms	I,II,III
12	Lagrange interpolation, Newton Interpolation	II,III
13	Numerical integration, pivot point, interpolation, short presentations	I,II,III
14	Gaussian Quadrature and Gauss Legendre Integration formulations, extrapolation, short presentations	I,II,III

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Engineering Mathematics						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MAT 210-210E	3/4	4	6*	4	0	0

Department/Program	Mathematics/All Programs		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	102 MIN DD/ MAT 102E MIN DD/ MAT 104 MIN DD/ MAT 104E MIN DD/ MAT 120 MIN DD/ MAT 120E MIN DD		

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
	40%	60%	-	-

Course Description	Matrices and System of Equations, Systems of Linear Equations, Vector spaces, Eigenvalues and Eigenvectors, First Order Differentıal Equalions. . Hıgher Order Lınear Equatıons, The Laplace Transform. Systems of First Order Lınear Differential Equations
Course Objectives	1. To teach the methods of solıtıon of systems of linear equations an applıcatıons of matrix and determinant to provide skills in application to engineering problems. 2. To introduce the basic concepts necessary to understand. construct. solve and interpret differential equations, to teach methods to solve differantial equations of various types to provide skills in application to engineering problems. 3. To give an the ability to use mathematics knowldges to solve basic science and engineering problems.
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Solve the systems of linear equations.. provide aritmetic operations with matrices, compute the inverse of matrix, determine the value of determinant of a matrix and use Cramer rule to solve the systems. II. Learn the importance of the concepts of vector space, basis and dimension, compıute the matrix representation of a linear transformation, and evalıate the eigenvalues and the corresponding eigenvectors of the matrix. III. Classifv differential eqııations according to certain features. IV. Solve fisrt order linear eqııations and nonlinear eqııations of certain types, interpret the solıtions.

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.		X	
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.			X

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	*Tarih (Date)*	*İmza (Signature)*

İTÜ
COURSE SYLLABUS FORM

Course Name						
Probability and Statistics						

				Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
Code	Semester	Local Credits	ECTS Credits			
MAT 271E	4	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	Course Language	English
Course Prerequisites	None		

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	75%	25%		

Course Description	Counting Techniques, Concept of Probability, Probability Function, Probability Density Function, Bernoulli, Binom, Poisson Disributions, Exponantial, Gamma, Normal Density Functions, Random Variables of Multiple Dimensions, The Concept of Estimator and Properties of Estimators, Maximum Likelihood Function, Test of Hypothesis, Ki-Square Test, t-test, F-test, Correlation Theory.
Course Objectives	1.To introduce the counting techniques 2.To introduce the concept of probability 3.To introduce the basic elements of probability 4.To make aware of the students about the use of probability in Statistics
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. He will have an idea about counting techniques II. He will have an understanding of probability from the point of view of science III. He will be introduced with the basic elements of probability and learn how to use it IV. He will be introduced with the basic elements of statistics V. He will learn to look at a problem from the point of view statistics VI. When he is in need of statistics he will use statistics as a tool
Textbook	Sheldon Ross, 1998, A First Course in Probability, Prentice-Hall International. Murray R. Spiegel, 1961, Theory and Problems of Statistics, McGraw-Hill Book Company.
Other References	Cevdet Cerit, Müşerref Yüksel, 2005, Olasılık. Cevdet Cerit, Müşerref Yüksel, 2005, İstatistik.
Homework & Projects	All homeworks are to be handed in a week after they are assigned. Homeworks may be used as a source of exams.
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework	5	
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Counting Techniques	I
2	The Concept of Probability	II
3	Random Variable	II
4	Probability Function	III
5	Discrete Distributions	II-III
6	Continuous Distributions	III
7	Characteristic Functions	III
8	Decision Functions	IV
9	Estimators	IV
10	Properties of Estimators	IV
11	Test of Hypothesis	V
12	Test of Ki-Square	V
13	T Test , F Test	V
14	Correlation Theory	VI

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		X	
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Engineering Mechanics						

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MEK205E	3	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	MAT 102E MIN DD OR MAT 104E MIN DD		

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
		100%		

Course Description	Principles of statics, force vector, moment, equilibrium of particle and rigid body, equilibrium of forces in plane and space, supports and support reactions, structures, friction, center of gravity. Principles of dynamics, kinematics and kinetics of particles, definition of the problem in various coordinate systems, general motion, absolute and relative motion, work and energy, impulse and momentum, impact

Course Objectives	1.To provide the basic principles of statics and dynamics 2.To provide an ability to apply the principles of statics and dynamics on engineering problems

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Evaluate vector algebra (scalar and vectorial product, addition and subtraction) and calculate the moment about a point or axes. II. Calculate the center of gravity III. Calculate the support reactions IV. Determine the equilibrium of structures (beams, Gerber beams, trusses, frames, machines) V. Solve the kinematics and kinetic problems of particles VI. Use the free body diagram in problem solution VII. Solve the problem using work and energy principle VIII. Solve the problem using impulse and momentum principle

Textbook	JL MERIAM AND LG KRAIG, 1993, ENGINEERING MECHANICS, WILEY, ISBN:978047173932. R.C. HIBBELER, 2007, ENGINEERING MECHANICS,: STATICS, PRENTICE HALL, ISBN:0023540206.
Other References	R.C. HIBBELER, S.C. FAN, 1997, ENGINEERING MECHANICS: DYNAMICS, PRENTICE HALL, ISBN:9750402197. M. BAKIOĞLU, 2006, STATIK, BIRSEN YAYINEVI, ISBN:9755114432. M. BAKIOĞLU, 2000, DINAMIK, BETA YAYINEVI, ISBN:975486945X.
Homework & Projects	3
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	**Activities**	**Quantity**	**Effects on Grading, %**
	Midterm Exams	2	50%
	Quizzes		
	Homework	3	
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Principles of statics, force vectors	I
2	The free body diagram, definition of moment, Varignon s theorem, moment of a couple	I
3	Planar forces, resultant of a force system, equations of equilibrium	I-II
4	Equilibrium of rigid bodies	III-IV
5	Supports, support reactions	III
6	Center of gravity, theorems of Pappus-Guldinus	II
7	Friction	III-IV
8	Principles of dynamics, introduction to kinematics of particles	V
9	Kinematics of particles: Plane motion	V
10	Kinematics of particles: Space motion	V
11	Kinetics of particles	V-VI
12	Work and energy	VII
13	Impulse and momentum	VIII
14	Impulse and momentum(Continued) and impact	VIII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name
Strenght of Materials

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
MUK 207E	4	3	5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	STA 201E MIN DD OR STA 202E MIN DD OR STA 204E MIN DD OR MEK 205E MIN DD		

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
		75%	25%	

Course Description	Basic Concepts. Mechanical Properties of Materials. Axial Loading. Transverse Shear. Bending. Deflection of Beams. Torsion. Buckling of Columns. States of Stress and Strain. Criteria for Failure. Combined Loadings.
Course Objectives	1.To provide the basic concepts and principles of strength of materials 2.To give an ability to calculate stresses and deformations of objects under external loadings 3.To give an ability to apply the knowledge of strength of materials on engineering applications and design problems
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Determine the geometric properties of area elements II. Calculate the support reactions and internal forces in structural elements III. Distinguish two basic types of stresses IV. Calculate the stresses by using internal forces and moments V. Determine the stresses under combined loadings VI. Determine the principal stresses by using Mohr Circle VII. Calculate the deformations under various loading types VIII. Calculate the internal forces and resulting forces deformations in statically indetermined systems IX. 9. Optimize safety and economics for engineering applications
Textbook	Mustafa Savcı, Alaeddin Arpacı, 2007, Mukavemet, Teorik Esaslar, Çözümlü Problemler, Birsen Yayınevi Ltd. Şti., ISBN:975-511-106. Ferdinand P. Beer, E.Russel Johnston, Jr., John T. DeWolf, 2004, Mechanics of Materials, McGraw-Hill Companies, ISBN:007-123568-X.
Other References	R.C.Hibbeler, 2004, Mechanics of Materials, Prentice Hall, ISBN:0-13-124-571. Mustafa İnan, 2001, Cisimlerin Mukavemeti, ÝTÜ Vakfý, ISBN:975-7463-05. Mehmet Bakioğlu, 2001, Cisimlerin Mukavemeti, Beta Basım Yayım Dağıtım A.Ş., ISBN:975-486-435. Mehmet Omurtag, 2005, Mukavemet Cilt-I, Birsen Yayınevi Ltd. Şti., ISBN:975-511-431. Mehmet Omurtag, 2005, Mukavemet Cilt-II, Birsen Yayınevi Ltd. Şti., ISBN:975-511-432.
Homework & Projects	All homework problems are to be handed in a week after they are assigned. Homework problems may be used as a source for exams.
Laboratory Work	
Computer Use	Students are encouraged to use computer programs to solve their homework assignments.
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	30%
	Quizzes	3	15%
	Homework	2	5%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Moments of Inertia for an Area	I
2	Internal Forces in Structural Elements	II
3	Fundamentals of Strength of Materials. Concepts of Stress and Internal Force	III
4	Axial Force. Thermal Stresses. Thin- Walled Cylinders. Statically Indetermined Systems	IV,VII,VIII
5	Shearing Force	IV
6	Pure Bending	IV
7	Unsymmetrical Bending	IV,V
8	Deflection of Beams	VII,VIII
9	Deflection of Beams. Torsion	IV,VII,VIII
10	Torsion. Buckling of Columns	IV
11	States of Stress	VI
12	States of Strain.	VII
13	Failure Criteria	VI-IX
14	Combined Loadings	VI-IX

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.		X	
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name
Technical Drawing

Code	Semester	Local Credits	ECTS Credits	Theoretical	Tutorial	Laboratory
				Course Implementation, Hours/Week		
RES103E	1	3	4	2	2	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	Course Language	English
Course Prerequisites			

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
		60%	40 %	

Course Description	Technical Drawing in Engineering, Technical Drawing Equipments, Meanings of Line Types, Lettering, Fundamentals of Dimensioning, Principles of Projection, Orthographic Views, Multiview Sketching, Auxiliary Views, Section Views, Surface Finishing Symbols, Fasteners and Drawings. Principles of Computer Aided Technical Drawing, Sketching Commands, Modifying Commands, Two Dimensional Sketching.

Course Objectives	1.To give an ability to write and read technical drawings 2.To provide the applications of dimensioning, surface finishing symbols and geometrical tolerances on the technical drawings, 3.To give an ability to draw standard machine elements and assembly drawings. 4. To give an ability to draw in computer environment.

Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Create freehand sketching and lettering II. Give dimensions on the drawings. III. Sketch the orthographic views of the machine parts. IV. Draw section views of the machine parts. V. Apply the surface finishing symbols on the drawings. VI. Draw the fasteners. VII. Sketch the 2-dimensional drawings in computer environment. VIII. Print out the 2-dimensional drawings.

Textbook	J.H.EARLE, 2008, ENGINEERING DESIGN GRAPHICS: AUTOCAD2007, PRENTICE-HALL PUBL, ISBN:978013204356. S.KURT, I.GERDEMELI, C.E.IMRAK, 2005, MÜHENDISLIK ÇIZIMIN ESASLARI, BIRSEN YAYINEVI, ISBN:978975511435.
Other References	I.Z.ŞEN,N.ÖZÇILINGIR, 2007, TEKNIK RESIM, TEMEL BILGILER, DE-HA YAYIN, ISBN:978975956604. I.Z.ŞEN,N.ÖZÇILINGIR, 2007, MAKINE RESMI, DE-HA YAYIN, ISBN:9759566079. F.E. GIESECKE, ET.AL., 2004, ENGINEERING GRAPHICS, PEARSON/PRENTICE HALL, ISBN:0131415212. G.R.BERTOLINE, ET.AL.,, 2003, TECHNICAL GRAPHICS COMMUNICATION, MCGRAW-HILL, ISBN:0073655988.
Homework & Projects	Two Homework Problems About Working Drawing A Part Are To Be Handed In Three Week After They Are Assigned.
Laboratory Work	
Computer Use	AUTOCAD
Other Activities	Each Week, Working Drawings Are Assigned and To Be Handed In At The End Of The Tutorials. They Are Corrected And Given Back A Week After.

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	20%
	Quizzes		
	Homework	2	20%
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities	14	20%
	Final Exam	1	40%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Introduction to Technical Drawing and Lettering	I
2	Principles of Dimensioning and Flat Parts	II
3	Principles of Projection and Orthographic Views	II, III
4	Multiviews	II, III
5	Sectional Views	IV
6	Surface Roughness and Surface Finishing Symbols	IV, V
7	Machine Assembly Drawing - Fasteners Drawing	VI
8	Introduction to Computer Aided Technical Drawing	VII, VIII
9	Basic Drawing Commands (Draw Commands)	VII, VIII
10	Basic Drawing COmmands (Modify Commands)	VII, VIII
11	Layer Commands – Setting Commands	VII, VIII
12	Dimensioning in Computer Environment	VII, VIII
13	Sectional Views in Computer Environment	VII, VIII
14	Machine Assembly Drawing in Computer Environment	VII, VIII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	**2**	**3**
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		X	
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name
Thermodynamics

				Course Implementation, Hours/Week		
Code	**Semester**	**Local Credits**	**ECTS Credits**	**Theoretical**	**Tutorial**	**Laboratory**
TER201E	5	3	4,5	3	0	0

Department/Program	Textile Engineering/ Textile Engineering		
Course Type	Compulsory	**Course Language**	English
Course Prerequisites	KIM 101E MIN FF AND FIZ 101E MIN FF OR FIZ 111 MIN FF		

Course Category by Content, %	**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
		100 %		

Course Description	Introduction and Basic Concepts: Thermodynamics and Energy, Zeroth Law of Thermodynamics, Energy Conversion and General Energy Analysis, Properties of Pure Substances, Energy Analysis of Closed Systems, Mass and Energy Analysis of Control Volumes, The Second Law of Thermodynamics: Heat Engines, Refrigerators and Heat Pumps, The Carnot Cycle, Entropy and The Increase of Entropy Principle, Exergy: A Measure of Work Potantial
Course Objectives	1.To introduce the principles of thermodynamics related to the conversion of energy from one form to another 2.To introduce the pure substance through the phase change processes in order to establish the relationships among thermodynamics properties and how to use thermodynamic property tables 3.To introduce the first law of thermodynamics with the Energy Conservation Principle and their application in both closed and open systems 4.To introduce the second law of thermodynamics with the concept of Entropy and Degradation of Energy during the energy transfer in order to determine the theoretical limits for the performance of 5.To introduce the basic concepts of thermodynamics for the analysis of practical engineering problems

Course Learning Outcomes	Student, who passed the course satisfactorily can:
	  I. To understand the concept of thermodynamics as the energy transformation
	  II. To utilize the everyday engineering example about energy transformation
	  III. To use the relationship between the thermodynamics properties
	  IV. To use the thermodynamic tables in engineering calculations
	  V. To understand and apply the Conservation of Energy Principle or First Law of Thermodynamics
	  VI. To solve the problems involving the open and closed systems, and to use the ideal gas equation
	  VII. To understand and apply the second law of thermodynamics
	  VIII. To solve the problems involving the performance of the engineering systems

Textbook	Y.A. ÇENGEL, M.A. BOLES, 2007, THERMODYNAMICS, AN ENGINEERING APPROACH, MCGRAW-HILL.
Other References	M.J. MORAN VE H.N. SHAPIRO, 2008, FUNDAMENTALS OF ENGINEERING THERMODYNAMICS, JOHN WILEY&SONS. Y.A. ÇENGEL, M.A. BOLES, 2008, TERMODINAMIK, MÜHENDISLIK YAKLAŞIMIYLA, GÜVEN BILIMSEL. K.WARK VE D.E. RICHARDS, 1999, THERMODYNAMICS, MCGRAW-HILL. R.T. BALMER, WEST PUBL., 1990, THERMODYNAMICS, ST PAUL. W.Z. BLACK VE G. HARTLEY, 1985, THERMODYNAMICS, HARPER AND ROW.
Homework & Projects	Minimum five homework sets will be assigned.
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	2	40 %
	Quizzes		
	Homework	5	10 %
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	50%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Basic Concepts and Thermodynamics: Thermodynamics and Energy, Systems and Control Volumes, Properties of a System, State and Equilibrium, Processes and Cycles, Temperature and the Zeroth Law of Thermo	I
2	Energy, Energy Transfer and General Energy Analysis: Forms of Energy, Energy Transfer by Heat, Energy Transfer by Work, Mechanical Forms of Work	I-II
3	Energy, Energy Transfer and General Energy Analysis: Energy Conversion Efficiencies, Energy and Environment	II-III
4	Properties of Pure Substances: Pure substance, Phases of a Pure Substance, Property Diagrams for Phase-Change Processes	I-III
5	Properties of Pure Substances: Property Tables, The Ideal-Gas Equation of State, Compressibility Factor, Other Equations of State	IV
6	Energy Analysis of Closed Systems: Moving Boundary Work, Energy Balance for Closed Systems, Specific Heats	III-IV
7	Energy Analysis of Closed Systems: Internal Energy, Enthalpy, and Specific Heats of Ideal Gases, Internal Energy, Enthalpy, and Specific Heats of Solids and Liquids	III-IV, VI
8	Mass and Energy Analysis of Control Volumes: Conservation of Mass, Flow Work and the Energy of a Flowing Fluid, Energy Analysis of Steady-Flow Systems Energy Balance	III-IV, VI
9	Mass and Energy Analysis of Control Volumes: Some Steady-Flow Engineering Devices, Energy Analysis of Unsteady-Flow Processes: Mass Balance and Energy Balance	V, VI
10	The Second Law of Thermodynamics: Thermal Energy Reservoirs, Heat Engines, Refrigerators and Heat Pumps, Perpetual-Motion Machines, Reversible and Irreversible Processes	V, VI
11	The Second Law of Thermodynamics: The Carnot Cycle, The Carnot Principles, The Thermodynamic Temperature Scale, The Carnot Heat Engine, The Carnot Refrigerator and Heat Pump	V, VI
12	Entropy: The Increase of Entropy Principle, Entropy change of Pure Substances, Isentropic Processes, Property Diagrams Involving Entropy, The Tds Relations, Entropy Change of Liquids and Solids	VII, VIII
13	Entropy: The Entropy Change of Ideal Gases, Reversible Steady-Flow Work, Minimizing the Compressor Work, Isentropic Efficiencies of Steady-Flow Devices, Entropy Balance	VII, VIII
14	Exergy: A Measure of Work Potential: Reversible Work and Irreversibility, Second-Law Efficiency, Exergy Change of a System, Exergy Transfer by Heat, Work, and Mass, The Decrease of Exergy Principle an	VII, VIII

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.			X
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.	X		
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		X	

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name						
Turkish I						

| | | | | Course Implementation, Hours/Week | | |
Code	Semester	Local Credits	ECTS Credits	Theoretical	Tutorial	Laboratory
TUR 101	4	2		2	0	0

Department/Program	Textile Engineering/ Textile Engineering			
Course Type	Compulsory		**Course Language**	Turkish
Course Prerequisites	None			

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	100 %			

Course Description	Definition of Language, Language and Thought, Language and Culture, World Languages (In Point of Origin and Structure), The Significance of Turkish Language among World Languages, The Historical Development of Turkish Language, The Structure of Turkish Language, Turkish Phonetics, Todays Turkish Language,The Act of Writing and the Rules of Writing (Orthography), Spelling Rules, The Right Expression of Thought, Scientific Language and Turkish as a Scientific Language, Turkish Poetry and Poetry Language.
Course Objectives	1.To improve the consciousness of native language, 2.To provide knowledge about the history, structure and characteristics of Turkish Language, 3.To make students gain the ability of proper and effective usage of both spoken and written languages; and the right expression of thoughts, 4.To provide knowledge about Turkish Poetry.
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Understand the definition of language with respect to intellectual, cultural and social aspects, II. Understand the situation of Turkish Language among the world languages, III. Have knowledge about the structure, characteristics and history of Turkish Language, IV. Make effective use of both the spoken and written languages, V. 5. Have knowledge about poetry language and Turkish Poetry.

Textbook	Komisyon, 1984, Türk Dili ve Kompozisyon Bilgileri, Yargı Yayınevi.
Other References	
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	Definition of Language and the Significance of Language in Social Life	I
2	The Relationship Between Language and Thought	I
3	The Relationship Between Language and Culture/Society	I
4	The Origin of Languages. World Languages	II
5	The Situation and Significance of Turkish Language among the World Languages	II
6	The History and Development of Turkish Language	III
7	The Structure of Turkish Language	III
8	Turkish Phonetics	III
9	The Situation of Todays Turkish Language	III,IV
10	Written Language (grammar aspect)	IV
11	Written Language (meaning aspect)	IV
12	Turkish as a Scientific Language	II,III
13	Poetry Language and Turkish Poetry	V
14	Poetry Language and Turkish Poetry	V

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)

İTÜ
COURSE SYLLABUS FORM

Course Name
Turkish II

Code	Semester	Local Credits	ECTS Credits	Course Implementation, Hours/Week		
				Theoretical	Tutorial	Laboratory
TUR 102	6	2	2	2	0	0

Department/Program	Textile Engineering/ Textile Engineering			
Course Type	Compulsory	**Course Language**		Turkish
Course Prerequisites	None			

Course Category by Content, %	Basic Sciences	Engineering Science	Engineering Design	General Education
	100 %			

Course Description	Written Expression, Method and Planning of Written Expression, Writing Exercise, Scientific Texts (Article-Report-Critic), Official Texts (Petition-Resume), Genres of Literature, Essay, Column, Travel Writing, Biography, Story, Novel, Verbal Literature, Verbal Expression and Communication
Course Objectives	1.To improve the written and verbal expressions, 2.To improve the scientific expression and provide knowledge for writing scientific texts, 3.To provide knowledge about genres of literature and their evaluation.
Course Learning Outcomes	Student, who passed the course satisfactorily can: I. Express his/her thoughts and ideas both in verbal and written way, II. Write scientific and official texts, III. Evaluate various genres of literature. IV. Perform planned/unplanned speeches.

Textbook	Komisyon, 1984, Türk Dili ve Kompozisyon Bilgileri, Yargı Yayınevi.
Other References	OLCAY ÖNERTOY, 1984, ÇAĞDAŞ TÜRK HIKAYE VE ROMANI, İŞ BANKASI YAYINLARI
Homework & Projects	
Laboratory Work	
Computer Use	
Other Activities	

Assessment Criteria	Activities	Quantity	Effects on Grading, %
	Midterm Exams	1	40%
	Quizzes		
	Homework		
	Projects		
	Term Paper/Project		
	Laboratory Work		
	Other Activities		
	Final Exam	1	60%

COURSE PLAN

Weeks	Topics	Course Outcomes
1	General Information about Writing	I
2	Planning and Methodology of Writing	I
3	Writing Excercise	I
4	Scientific Research Texts (Article-Report-Critic)	I,II
5	Official Writings (Petition-Resume)	I,II
6	Genres of Literature	III
7	Essay, Column	III
8	Travel Writing, Biography	III
9	Story	III
10	Novel	III
11	Verbal Expressions and Verbal Literature	I-IV
12	General Information about Verbal Communication	I-IV
13	Conference, Panel, Symposium	I,II-IV
14	Conference, Panel, Symposium	I,II-IV

Relationship between the Course and TEXTILE Engineering Curriculum

	Program Student Outcomes	Level of Contribution		
		1	2	3
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	X		
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	X		
3	An ability to communicate effectively with a range of audiences.			X
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	X		
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	X		
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	X		
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	X		

Scale: 1: Little, 2. Partial, 3. Full

Düzenleyen (Prepared by)	Tarih (Date)	İmza (Signature)