Evrak Tarih ve Sayısı: 04.07.2024-807378

MANİSA CELAL BAYAR ÜNİVERSİTESİ
MANİSA TEKNİK BİLİMLER MESLEK YÜKSEKOKULU
MAKİNE VE METAL TEKNOLOJİLERİ BÖLÜMÜ
ENDÜSTRİYEL KALIPÇILIK PROGRAMI

2021 ÖĞRETİM PLANI

1.Sınıf 1. Yarıyıl							
Türkçe/İngilizce Ders Kodu	**Türkçe Ders Adı**	**İngilizce Ders Adı**	**T**	**U**	**S**	**K**	**AKTS**
EKT 1101	Fizik	Physics	2	0	2	2	3
EKT 1103	Mesleki Matematik	Mathematics For Technicians	3	0	3	3	4
EKT 1105	Teknik Resim	Technical Drawing	3	1	4	4	6
EKT 1107	İmalat İşlemleri	Manufacturing Processes	3	1	4	4	6
EKT 1109	Ölçme ve Kontrol	Measurement and Control	1	1	2	2	3
EKT 1111	Bilgisayar Destekli Çizim 1	Computer Aided Drawing 1	2	1	3	3	4
EKT 1113	Meslek Etiği	Professional Ethics	1	0	1	1	1
EKT 1001	**Seçmeli Dersler**	**Elective Courses**	**2**	**0**	**2**	**2**	**3**
EKT 1201	*Bilgi Teknolojileri*	*Information Technology*	2	0	2	2	3
EKT 1203	*İleri İmalat Teknolojisi 1*	*Advanced Manufacturing Technology 1*	2	0	2	2	3
EKT 1205	*Kalite Güvencesi ve Standartlar*	*Quality Assuarance And Standards*	2	0	2	2	3
		Toplam	**17**	**4**	**21**	**21**	**30**

1.Sınıf 2.Yarıyıl							
Türkçe/İngilizce Ders Kodu	**Türkçe Ders Adı**	**İngilizce Ders Adı**	**T**	**U**	**S**	**K**	**AKTS**
EKT 1102	Bilgisayar Destekli Çizim 2	Computer Aidet Desing 2	2	1	3	3	5
EKT 1104	Saç Metal Kalıpçılık Tekniği	Sheet Metal Dying Techniques	4	2	6	6	8
EKT 1106	Makine Meslek Resmi	Machine Drawing	2	1	3	3	4
EKT 1108	Malzeme Teknolojisi	Material Technology	2	0	2	2	3
EKT 1110	Mukavemet	Strength Of Materials	2	0	2	2	3
EKT 1112	Bilgisayar Destekli Üretim 1	Computer Aided Manufacture 1	2	1	3	3	4
EKT 1004	**Teknik Olmayan Seçmeli Dersler**	**Non-Technical Elective Courses**	**2**	**0**	**2**	**2**	**3**
EKT 1202	*Çevre Koruma*	*Environmental Protection*	2	0	2	2	3
EKT 1204	*İlk Yardım*	*First Aid*	2	0	2	2	3
EKT 1206	*Girişimcilik*	*Entrepreneurship*	2	0	2	2	3
		Toplam	**16**	**5**	**21**	**21**	**30**

Doç. Dr. İbrahim AYDIN
Bölüm Başkanı

MANİSA CELAL BAYAR ÜNİVERSİTESİ
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2.Sınıf 3.Yarıyıl							
Türkçe/İngilizce Ders Kodu	**Türkçe Ders Adı**	**İngilizce Ders Adı**	**T**	**U**	**S**	**K**	**AKTS**
EKT 2101	Bilgisayar Destekli Üretim 2	Computer Aided Manufacture 2	2	1	3	3	4
EKT 2103	Enjeksiyon Kalıpçılığı	Injection Molding	4	2	6	6	8
EKT 2105	CNC Freze Teknolojisi	CNC Milling Technology	2	1	3	3	4
EKT 2107	Hidrolik - Pnömatik	Hydroulic Pnoumatic	2	1	3	3	4
EKT 2109	Araştırma Yöntem ve Teknikleri	Research Methods and Techniques	2	0	2	2	3
EKT 2111	Sosyal Sorumluluk	Social Responsibility	1	0	1	1	1
EKT 2113	İş Sağlığı ve Güvenliği	Occupational Health and Safety	2	0	2	2	3
EKT 2003	**Teknik Seçmeli Dersler**	**Technical Elective Courses**	**2**	**0**	**2**	**2**	**3**
EKT 2201	*Dövme Kalıpçılığı*	*Forging Molding*	2	0	2	2	3
EKT 2203	*Kalıp Malzemeleri ve Isıl İşlem Bilgisi*	*Mould Materials and Heat Treatment Information*	2	0	2	2	3
EKT 2205	*Kaynak Teknolojisi*	*Welding Technology*	2	0	2	2	3
EKT 2207	*Kesici Takım Teknolojisi*	*Cutting Tools Tecnology*	2	0	2	2	3
EKT 2209	*İleri İmalat Teknolojisi 2*	*Advanced Manufacturing Technology 2*	2	0	2	2	3
EKT 2211	*Özel Üretim Yöntemleri*	*Special Manufacturing Methods*	2	0	2	2	3
EKT 2213	*Plastik Şişirme ve Ektürizyon Kalıplama*	*Plastic Blow Molding and Extrusion*	2	0	2	2	3
		Toplam	**17**	**5**	**22**	**22**	**30**

2.Sınıf 4.Yarıyıl							
Türkçe/İngilizce Ders Kodu	**Türkçe Ders Adı**	**İngilizce Ders Adı**	**T**	**U**	**S**	**K**	**AKTS**
MYO 2002	İşletmede Mesleki Eğitim	Vocational Training in Workplace	5	0	5	4	18
AİT 2102	Atatürk İlkeleri ve İnkılap Tarihi	Atatürk's Principles and History of Revolution	4	0	4	4	4
TDL 2102	Türk Dili	Turkish Language	4	0	4	4	4
YDI 2102	Yabancı Dil	Foreing Language	4	0	4	4	4
		Toplam	**17**	**0**	**17**	**16**	**30**
		Genel Toplam	**67**	**14**	**81**	**80**	**120**

T: Teori **U:** Uygulama **S:** Ders Saati **K:** Ulusal Kredi **AKTS:** Avrupa Kredi Transfer Sistemi

Doç. Dr. İbrahim AYDIN
Bölüm Başkanı

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding Physics

General Description

Course Name	:	Physics
Course Code	:	EKT 1101
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Objective is to achieve a good understanding of basic concepts and to be able to apply these concepts to a variety of physical situations. Students will acquire skills in scientific methods, critical reasoning and problem solving.
Course Contents	:	Unit systems; Vector, Force, Moment; Balace and Balance conditions; Center of gravity; Laws of movement; Work, Power, Energy; Heat and Temperature; Types of Heat Transfer and Heat Transfer(Conduction, Convection and Radiation); Basic Fluid Properties, Stream Flow Types and Account; Channel and Pipe Flow; Pressure Drop
Recommended or Required Reading	:	1) Physics 1, Raymond A. Serway , Robert J. Beichner ,Çev :(Prof. Dr. Kemal Çolakoğlu) PALME PUBLISHING 2) Scientific Principles of General Physics and Technology Hakan Şevki AYVACI, Yüksel ÇEKBAŞ, Pegem A Publishing 3)Mechanical Statics for Engineers, Prof. Dr. F.P.BEER; Prof. Dr. E.R.JOHNSTON, Çev. Prof. Dr. F.KESKİNEL, Doç. Dr. Tekin ÖZBEK, BİRSEN PUBLISHER 4)Dynamics Durmuş Günay, Alpay Aydemir; Değişim publications, 1998 5)Engineering Mechanics, S.TIMOSHENKO; D.H. YOUNG, Çev: (Prof. Dr. İlhan KAYAN), İTÜ publications
Planned Learning Activities and Teaching Methods	:	Face to face, Presentation, Seminar, Project, Laboratory Applications (if necessary) Lectures, Practical Courses,
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to understand basic physical laws and learn to use these laws in daily life

2 - To be able to apply basic mathematical methods in problem solving

3 - To be able to know the concepts of work, power and energy and express them in relation

4 - To be able to separate static and dynamic systems from each other

5 - To be able to make calculations about thermal and fluid systems

Weekly Course Contents

Week 1	Theoretical	:	Introduction (Unit systems and conversions, Basic concepts)
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Vector, Force, Moment
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Vector, Force, Moment
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Balace and Balance conditions;
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Center of gravity
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Laws of movement
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Laws of movement
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Work, Power, Energy
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Heat and Temperature
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Heat and Temperature
	Practice	:	

	Laboratory :	
Week 12	Theoretical :	Types of Heat Transfer and Heat Transfer(Conduction, Convection and Radiation
	Practice :	
	Laboratory :	
Week 13	Theoretical :	Types of Heat Transfer and Heat Transfer(Conduction, Convection and Radiation
	Practice :	
	Laboratory :	
Week 14	Theoretical :	Stream Flow Types and Account Channel and Pipe Flow
	Practice :	
	Laboratory :	
Week 15	Theoretical :	Stream Flow Types and Account Channel and Pipe Flow
	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	2,00
Final	No	1	2,00
Individual study before lecture	Yes	14	14,00
Individual study after lecture	Yes	14	14,00
Quizzes	Yes	1	2,00
Attending lectures	Yes	14	42,00
Preparation for final	Yes	1	10,00
Preparation for midterm	Yes	1	6,00
Total Hours			92,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	4	0	0	0	1	0	5	0	0	0
2	0	3	1	0	0	0	0	4	0	0	0
3	0	4	1	0	0	1	0	4	0	0	0
4	2	4	0	0	0	4	0	4	0	0	0
5	1	2	0	0	0	1	0	5	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Mathematics For Technicians

General Description

Course Name	:	Mathematics For Technicians
Course Code	:	EKT 1103
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	3
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	4
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Aim of this course is to teach adequate and efficient mathematics to create an infrastructure for students.
Course Contents	:	Algebra, polynomials, Ratio and proportion, Equations and Inequalities, total symbol, multiplication symbol, sequences, Basic geometry, basic trigonometry, Parabola
Recommended or Required Reading	:	textbook Balcı, M.Analiz I, Balcı Publishing, 2001 F. AYRES, Calculus Schaums Outline Series, 1979 D. ÇOKER, General Mathematics I, Detay Publishing
Planned Learning Activities and Teaching Methods	:	Conferences, Applied Courses, Presentations, Seminars, Projects, Laboratory Practices (if necessary)
Recommended Optional Programme Components	:	-

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to solve applications of algebra

2 - To be able to solve applications of Equations and inequalities

3 - To be able to solve applications of sequences

4 - To be able to solve applications of geometry

5 - To be able to solve applications of trigonometry

6 - To be able to solve applications of parabola

Weekly Course Contents

Week 1	Theoretical :	Algebra
	Practice :	
	Laboratory :	
Week 2	Theoretical :	Polynomial operations and polynomials
	Practice :	
	Laboratory :	
Week 3	Theoretical :	Ratio and proportion concepts and applications
	Practice :	
	Laboratory :	
Week 4	Theoretical :	Equations and Inequalities
	Practice :	
	Laboratory :	
Week 5	Theoretical :	Inequality
	Practice :	
	Laboratory :	
Week 6	Theoretical :	total symbol multiplication symbol sequences
	Practice :	
	Laboratory :	
Week 7	Theoretical :	total symbol multiplication symbol sequences
	Practice :	
	Laboratory :	
Week 8	Theoretical :	midterm-exam
	Practice :	
	Laboratory :	
Week 9	Theoretical :	arithmetic sequence geometric sequence infinite geometric sequence Basic geometry polygons ring and circles
	Practice :	
	Laboratory :	
Week 10	Theoretical :	geometric objects coordinate systems Conics
	Practice :	
	Laboratory :	
Week 11	Theoretical :	basic trigonometry
	Practice :	
	Laboratory :	
Week 12	Theoretical :	trigonometric functions

	Practice :	
	Laboratory :	
	Theoretical :	The basic operations of Functions Types of functions
Week 13	Practice :	
	Laboratory :	
	Theoretical :	Parabola and the graph
Week 14	Practice :	
	Laboratory :	
	Theoretical :	overview
Week 15	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Individual study after lecture	Yes	7	133,00
Total Hours			135,00
ECTS			5,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	4	4	1	1	1	1	4	3	2	0
2	1	0	1	0	0	1	0	0	1	0	0
3	0	0	1	0	0	1	0	2	0	2	0
4	2	0	0	1	0	0	0	1	0	0	0
5	0	0	0	0	1	0	0	0	0	2	0
6	1	0	1	0	0	2	0	0	1	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Technical Drawing

General Description

Course Name	:	Technical Drawing
Course Code	:	EKT 1105
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	3
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	6
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The course aims to teach the designers to design fabrication components properly. With parallel to the developing technology nowadays, the course aims to solve the arising problems.(technical- manufacturing problems) with improving technical drawing knowledge.
Course Contents	:	To be able to draw machine parts by hand and picture tools, handicraft improvement of students, to be able to make geometric drawings, understand basic drawing principles related to machine drawing, create the perspective of an object from its views and views from its perspective, to interpret from a drawing.
Recommended or Required Reading	:	Technical Drawing I - II, Kemal Türkdemir, Bilal OFSET, Denizli, 2001.
Planned Learning Activities and Teaching Methods	:	Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to read technical drawing

2 - To be able to take section

3 - To be able to make mesaurament and give tolerance

4 - To be able to make standart mechanical parts drawing

Weekly Course Contents

Week 1	Theoretical	:	Description of the methodology of the lecture, the importance of technical drawing, usage of sketch line, standard text and line examples
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Geometric drawings. Geometric drawings with using ruler. Drawing internal and external tangents between two circles.
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Perspective views
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Perspective views
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Dimensions, symbols and tolerance
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Section view, half and full view samples Developments, intersection models, sample application
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Section view, half and full view samples Developments, intersection models, sample application
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Drawing of standard machine parts (Bolt, wedge, pin and perno)
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Assembly application I
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Assembly application II
	Practice	:	
	Laboratory	:	

Week 12	Theoretical :	Combination of ball bearings, roller bearings, anti friction bearings, cylindrical bearings
	Practice :	
	Laboratory :	
Week 13	Theoretical :	Disassemble applications
	Practice :	
	Laboratory :	
Week 14	Theoretical :	Application of belt, pulley, gearwheel
	Practice :	
	Laboratory :	
Week 15	Theoretical :	overview
	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	2,00
Final	No	1	2,00
Attending lectures	Yes	14	56,00
Application / Practice	Yes	14	56,00
Individual study before lecture	Yes	14	28,00
Individual study after lecture	Yes	14	28,00
Total Hours			172,00
ECTS			6,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	2	0	0	0	0	2	1	0	0	0
2	1	0	0	0	0	0	3	0	0	0	0
3	0	3	0	0	0	0	1	0	0	0	0
4	3	4	0	0	0	0	3	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding Manufacturing Processes

General Description

Course Name	:	Manufacturing Processes
Course Code	:	EKT 1107
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	3
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	6
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Manufacturing procedures are helpful to understand the theory and practice of adequate infrastructure and provide the viewing angle of
Course Contents	:	Factors for metal cutting, turning, lathes, turning tools, milling, milling machine tools, milling tools, stalls track fastening systems, drilling, drills, drilling machines, planing, Dragline machines, Planing Process.
Recommended or Required Reading	:	Lecture Notes in Mechanical Engineering in Manufacturing Applications
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to understand general manufacturing techniques

2 - To be able to increase the ability of critising the system and its improvement

3 - To be able to choose the appropriate methods for manufacturing by understanding them

4 - Learning G codes basically

Weekly Course Contents

Week 1	Theoretical	:	Design and manufacturing input
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Transaction management in the factory
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Turning machine tools
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Turning the process
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Milling machine tools
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	milling process Drilling with a drill
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	milling process Drilling with a drill
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Planing, Vargelleme, Grinding-I Planing Vargelleme, Grinding-II
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	broaching
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Honing
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	process modeling
	Practice	:	
	Laboratory	:	

Week 13	Theoretical	:	Introduction to CNC machine tools
	Practice	:	
	Laboratory	:	
Week 14	Theoretical	:	G-code CNC machine tools and software
	Practice	:	
	Laboratory	:	
Week 15	Theoretical	:	Overview
	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Individual study after lecture	Yes	5	10,00
Attending lectures	Yes	14	42,00
Individual study before lecture	Yes	5	10,00
Workshop	Yes	10	80,00
Preparation for midterm	Yes	1	4,00
Preparation for final	Yes	1	4,00
Application / Practice	Yes	4	16,00
Total Hours			168,00
ECTS			6,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	1	3	0	0	0	1	0	0	0	0
2	2	0	0	1	0	0	1	0	0	0	0
3	0	0	0	1	0	0	0	0	0	0	0
4	0	0	0	3	0	0	5	1	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding Measurement and Control

General Description

Course Name	:	Measurement and Control
Course Code	:	EKT 1109
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	1
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	3
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	1. To define measurement and control devices using in advanced measurement and control methods. 2. To be able to make control processes by advanced measurement and control methods.
Course Contents	:	Comparators Measurement of angle and angled divisions To determine shape and positions Surface control with gauges and optical glasses Matching and gauging principles Surface Perfection Test of machining tools Measurement of screw steps Measurement of gears.
Recommended or Required Reading	:	Caliper, Micrometer, Comparator, Set of Gauge Çelik S., "Measurement and Control "Ministry of National Education Publications, İstanbul, Türkiye.
Planned Learning Activities and Teaching Methods	:	Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to comprehend comparative measurement techniques of machine parts.

2 - To be able to determine the tolerances of the shape and position of machine parts according to the specific reference.

3 - To be able to decide on appropriate tolerances and gauges.

4 - To be able to determine whether the machined surfaces are within the specified geometric irregularity limits.

5 - To be able to adjust tooling, bonding and tooling with learned measurement and control techniques.

6 - To be able to measure the size and profile of the teeth.

Weekly Course Contents

Week 1	Theoretical	Various Calipers sensibilities computation and measurement techniques.
	Practice	Comparative measurements with various calipers.
	Laboratory	
Week 2	Theoretical	Measuring techniques of various micrometer .
	Practice	Comparative measurements with the thickness and depth micrometers.
	Laboratory	
Week 3	Theoretical	Working principles of mechanical angle measurement tools and systems.
	Practice	Usage of workshop-laboratory environment.
	Laboratory	
Week 4	Theoretical	Working principles of optical angle measurement tools and angle measuring.
	Practice	Using an optical projector.
	Laboratory	
Week 5	Theoretical	Controlling of surface roughness of finished surfaces.
	Practice	Measuring of surface roughness.
	Laboratory	
Week 6	Theoretical	Measuring of screw uptooth diameter wit micrometers. Measuring dimensions of gear for movement and force transportation with minimum friction and noise.
	Practice	
	Laboratory	
Week 7	Theoretical	Measuring of screw uptooth diameter wit micrometers. Measuring dimensions of gear for movement and force transportation with minimum friction and noise.
	Practice	
	Laboratory	
Week 8	Theoretical	Midterm-exam
	Practice	
	Laboratory	
Week 9	Theoretical	Introduction to thickness and limit gauges,gauge tolerances. Inroduction to light wave lengths and interference event.
	Practice	
	Laboratory	
Week 10	Theoretical	Required measurements to determine of shape and position. Calculation of total (cumulative) shape and position defaults by statistical methods.
	Practice	
	Laboratory	

Week 11	Theoretical	:	Limits and exercise systems. Manufacturing principles of limit gauges.
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	Usage of tolerance rulers.
	Practice	:	
	Laboratory	:	
Week 13	Theoretical	:	Realtion between tolerance degrees and manufacturing methods of machine parts.
	Practice	:	
	Laboratory	:	
Week 14	Theoretical	:	Right settings of machine tools for manufacturing of good quality parts.
	Practice	:	
	Laboratory	:	
Week 15	Theoretical	:	Overview
	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Application / Practice	Yes	14	70,00
Laboratory	Yes	5	15,00
Workshop	Yes	3	9,00
Total Hours			96,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	0	0	0	0	2	0	0	0	1	0
2	0	0	0	3	3	0	0	0	0	0	0
3	0	0	2	3	0	0	0	0	0	0	0
4	2	1	0	2	2	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	1	2	0	2	0	0	0	1	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Computer Aided Drawing 1

General Description

Course Name	:	Computer Aided Drawing 1
Course Code	:	EKT 1111
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	4
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	To be able to transfer and assemble the three dimensional parts together with the required tolerance values to the technical drawing environment.
Course Contents	:	Using screen editing and drawing help commands, selecting CAD software run options, doing screen and drawing settings and turning off CAD software, drawing by using basic drawing commands and using coordinate systems, doing technical drawings by using drawing commands and adding text to drawings,being able to use edit commands, changing the properties of drawing elements, copying drawing elements, doing measurement settings, changing measurements, adding surface marking, and adding tolerance, being abl e to do (two-dimensional) data transfer between CAD softwares.
Recommended or Required Reading	:	Solidworks, Haluk Tatar, Pusula Publishing, Istanbul, 2013.
Planned Learning Activities and Teaching Methods	:	Courses, labs and aplication projects.
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to make three-dimensional drawing on the computer

2 - To Be able to transfer drawing to technical drawing

3 - To be able to make assembly

4 - To be able to make tolerance to produce drawing

Weekly Course Contents

Week 1	Theoretical	:	Recognizing Autocad 2007 and to prepare working environment to draw
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 2	Theoretical	:	Line command and dimensioning
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 3	Theoretical	:	Direction and angle commands
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 4	Theoretical	:	Circle, delete, copy, move, mirror, offset, rotate, crop, fillet commands
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 5	Theoretical	:	Formatting and layers
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 6	Theoretical	:	Arc and spline commands
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 7	Theoretical	:	Hatch, scale, extension and chamfering
	Practice	:	Aplication of the lecture content
	Laboratory	:	
Week 8	Theoretical	:	Midterm exam
	Practice	:	Midterm exam
	Laboratory	:	
Week 9	Theoretical	:	Drawing applications
	Practice	:	Drawing applications
	Laboratory	:	
Week 10	Theoretical	:	Drawing applications
	Practice	:	Drawing applications
	Laboratory	:	
Week 11	Theoretical	:	Drawing applications
	Practice	:	Drawing applications
	Laboratory	:	

	Theoretical	:	Drawing applications
Week 12	Practice	:	Drawing applications
	Laboratory	:	
	Theoretical	:	Drawing applications
Week 13	Practice	:	Drawing applications
	Laboratory	:	
	Theoretical	:	Drawing applications
Week 14	Practice	:	Drawing applications
	Laboratory	:	
	Theoretical	:	overview
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Application / Practice	Yes	14	28,00
Attending lectures	Yes	14	42,00
Individual study before lecture	Yes	14	28,00
Individual study after lecture	Yes	14	28,00
Preparation for midterm	Yes	1	3,00
Preparation for final	Yes	1	4,00
Total Hours			135,00
ECTS			5,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	1	0	0	0	0	3	0	0	0	0
2	0	3	1	0	0	0	3	0	0	0	0
3	1	2	0	0	0	0	1	0	1	0	0
4	1	3	0	3	0	0	2	0	0	1	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Professional Ethics

General Description

Course Name	:	Professional Ethics
Course Code	:	EKT 1113
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	1
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	1
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Gain skills to the students, working in accordance with ethical rules in business life
Course Contents	:	In this course students will learn ethical concept, ethical definition, moral development process, ethical rules, ethical systems, ethical relationship with society, ethical questioning, social corruption, professional ethics, ethics in business life, professional corruption.
Recommended or Required Reading	:	
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to have the knowledge and skills to provide suitable environment for work ethics at the workplace.

2 - To be able to develop positive ideas about the concept of ethics.

3 - To be able to understand the principles of professional ethics correctly.

4 - To be able to apply the business ethics required by the profession in the workplace environment.

Weekly Course Contents

Week 1	Theoretical	:	Definition of ethics
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Moral Development process
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Ethical rules
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Ethical systems: Intended result Etic Rule of ethics
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Ethical systems: Social contract ethics Personal Ethics Social life ethic
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Relationship between ethic and society Consequences of acting in accordance with Ethical Values
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Ethical questioning Social corruption and varieties
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Mid-term exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Ethical questioning Social corruption and varieties
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	The concept of professional ethics
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Professional Ethics Principles: Accuracy legality Reliability Commitment to the Job
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	Ethical and non-ethical issues in business life

	Practice :	
	Laboratory :	
	Theoretical :	Professional Corruption
Week 13	Practice :	
	Laboratory :	
	Theoretical :	Consequences of appropriate behaviors in Work Ethics
Week 14	Practice :	
	Laboratory :	
	Theoretical :	Overview
Week 15	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Assignment	Yes	1	1,00
Final	No	1	1,00
Individual study after lecture	Yes	10	30,00
Total Hours			33,00
ECTS			1,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	2	2	0	0	0	0	0	0	3	0
2	2	0	0	2	0	0	0	0	0	0	0
3	0	2	1	0	1	0	1	1	0	1	0
4	2	0	0	0	0	2	0	0	2	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Information Technology

General Description

Course Name	:	Information Technology
Course Code	:	EKT 1201
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	This course is concerned with the development of competencies kazandırılmasını amaçlamaktır itself using computational facilities.
Course Contents	:	Internet access and Internet browser, e-mail management, forums, graphics, presentation preparation, promotional materials, preparation, operation table, formulas and functions, web-based learning, personal web site development
Recommended or Required Reading	:	Computer 2 Lecturer İsmail Yellow-Omer Bagci, Internet Programming 1-Turgut Yasar Abu Bakr Özseven, Computer and Internet use Cebi Honey Hasan
Planned Learning Activities and Teaching Methods	:	The narrative techniques of teaching methods, showing Motivations, group work, practical work, research, and individual teaching methods and techniques can be applied
Recommended Optional Programme Components	:	computer lab

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to know basic computer and internet information

2 - To be able to work in Excell

3 - Tobe able to prepare a presentation with Powerpoint

4 - To be able to work in Word

Weekly Course Contents

	Theoretical	:	Basic computer knowledge
Week 1	Practice	:	
	Laboratory	:	
	Theoretical	:	Information about internet and internet browsers
Week 2	Practice	:	
	Laboratory	:	
	Theoretical	:	Office programs, Word Interface, Text Operations
Week 3	Practice	:	
	Laboratory	:	
	Theoretical	:	Word Settings in Word
Week 4	Practice	:	
	Laboratory	:	
	Theoretical	:	Paragraph Settings, Page View, Tables, Drawings
Week 5	Practice	:	
	Laboratory	:	
	Theoretical	:	3D settings, operations on pictures
Week 6	Practice	:	
	Laboratory	:	
	Theoretical	:	File operations, general applications
Week 7	Practice	:	
	Laboratory	:	
	Theoretical	:	Midterm-exam
Week 8	Practice	:	
	Laboratory	:	
	Theoretical	:	Introduction to Excel
Week 9	Practice	:	
	Laboratory	:	
	Theoretical	:	Create formula
Week 10	Practice	:	
	Laboratory	:	
	Theoretical	:	Formula Applications
Week 11	Practice	:	
	Laboratory	:	
	Theoretical	:	Excel Cells, Data
Week 12	Practice	:	
	Laboratory	:	

	Theoretical	:	Formatting in Excel, Functions
Week 13	Practice	:	
	Laboratory	:	
	Theoretical	:	Power Point
Week 14	Practice	:	
	Laboratory	:	
	Theoretical	:	Power Point presentation
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Application / Practice	Yes	8	80,00
Research presentation	Yes	1	10,00
Total Hours			92,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	2	1	2	1	0	1	3	0	1	0
2	1	0	0	2	0	3	0	1	0	2	0
3	2	1	0	3	0	2	1	2	0	1	0
4	0	1	0	0	2	0	3	0	2	1	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Advanced Manufacturing Technology 1

General Description

Course Name	:	Advanced Manufacturing Technology 1
Course Code	:	EKT 1203
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The aim of this course is; To be able to comprehend the history and classification of non-traditional machining processes, and differentiate them from the classical machining methods, be familiar with the principles of operations, machining parameters, abilities and applications of the processes. To be able to understand the meaning and using of new technologies.
Course Contents	:	History and classification of nontraditional machining processes, Comparing with the classical machining methods, Ultrasonic Machining, Abrasive Jet Machining,Abrasive Flow Machining, Chemical Machining, Electrochemical Machining, Electric Discharge Machining, Electric Discharge Wire Cutting, Laser Beam Machining, Plasma Beam (Arc) Machining, Electron Beam Machining, Ion Beam Machining Methods. Electro-erosion processing with basic features, advantages and disadvantages comprehend. Electrodischarge drilling, cutting and grinding operations understand the basic properties of varieties. Chemical Etching (ECM) Machining Method. Chemical Etching method for non-traditional production methods used in industry to define the basic properties. Laser Machining Method. Used in the manufacturing industry to define the basic features and types of
Recommended or Required Reading	:	Erden A. "Non-Traditional Machining Processes", Handbook of Mechanical Engineering, 2nd Edition, Vol. 2 (Design and Production), Section 15, 53p., The Turkish Chamber of Mechanical Engineers, Publ. No: 170, Ankara, 1997.
Planned Learning Activities and Teaching Methods	:	Lecture, question and answer, video and demonstrations.
Recommended Optional Programme Components	:	Information will be measured by written exams consisting of short answer and structured questions

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences:

1 - To be able to comprehend the differences between traditional and non-traditional manufacturing methods

2 - To be able to understand the limitations of machining, and chipless production

3 - To be able to comprehend the meaning and using of new technologies

4 - To be able to comprehend the manufacturing of non-contact machining

5 - To be able to make the appropriate selection of manufacturing technology

6 - To be able to understand and use the terminology about Ultrasonic, chemical, electrochemical, electro-erosion, laser beam, electron beam, abrasive jet, water jet plasma treatments

Weekly Course Contents

Week 1	Theoretical	:	Non-Traditional Manufacturing Methods
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Ultrasonic Machining
	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
Week 3	Theoretical	:	Abrasive Jet Machining, Abrasive Flow Machining
	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
Week 4	Theoretical	:	Water jet Machining, Abrasive Water Jet Machining
	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
Week 5	Theoretical	:	Chemical Machining
	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
Week 6	Theoretical	:	Electrochemical Machining
	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
Week 7	Theoretical	:	Electric Discharge Machining (EDM)
	Practice	:	Practise in the company
	Laboratory	:	
Week 8	Theoretical	:	Electric Discharge Machining (EDM)
	Practice	:	Practise in the company
	Laboratory	:	
Week 9	Theoretical	:	Midterm
	Practice	:	
	Laboratory	:	

	Theoretical	:	Electric Discharge Wire Cutting (WEDM)
Week 10	Practice	:	Practise in the company
	Laboratory	:	
	Theoretical	:	Electric Discharge Wire Cutting (WEDM)
Week 11	Practice	:	Practise in the company
	Laboratory	:	
	Theoretical	:	Laser Beam Machining
Week 12	Practice	:	Practise in the company
	Laboratory	:	
	Theoretical	:	Plasma Beam (Arc) Machining
Week 13	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
	Theoretical	:	Electron Beam Machining Ion Beam Machining
Week 14	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	
	Theoretical	:	Electron Beam Machining Ion Beam Machining
Week 15	Practice	:	Examination of the subject with written and visual documents
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	2,00
Final	No	1	2,00
Attending lectures	Yes	15	30,00
Preparation for midterm	Yes	1	8,00
Preparation for final	Yes	1	15,00
Individual study before lecture	Yes	15	15,00
Individual study after lecture	Yes	15	15,00
Total Hours			87,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	2	2	0	2	2	0	1	1	0	0	0
2	1	2	0	0	1	2	1	0	0	0	0
3	2	2	0	1	1	0	0	0	0	0	0

4	2	1	0	2	0	2	0	0	0	0	0
5	1	2	0	0	0	0	1	1	0	0	0
6	1	2	0	0	1	2	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Quality Assuarance And Standards

General Description

Course Name	:	Quality Assuarance And Standards
Course Code	:	EKT 1205
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Gazi BÜYÜKTAŞ
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The importance of standards and quality improvement efforts for businesses and provide knowledge of professional standards
Course Contents	:	Standards and standardization, quality, total quality management, professional standards, CE marking
Recommended or Required Reading	:	Mehmet Emin MERTER, Total Quality Management Atlas Publishing, Ankara 2006 - Muhsin HALİS, Total Quality Management from Paradigm to Practice and ISO 9000 Quality Assurance Systems, Beta Basım Publisher, Istanbul 2000
Planned Learning Activities and Teaching Methods	:	Conferences, Applied Courses, Presentations, Seminars, Projects - Face to Face
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to understand the importance and benefits of standard and standardization

2 - To be able to understand the importance of professional standards

3 - To be able to understand the consumer perceptions of quality

4 - To be able to understand the historical development of quality

5 - To be able to understand the relationship between quality and cost

6 - To be able to understand the CE marking

Weekly Course Contents

Week 1	Theoretical	:	Standard and standardization concepts, the role of TSE
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Benefits of Standardization
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Basic concepts of quality, quality of goods and services, measuring quality
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Consumer perception of quality
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Historical development of quality: Inspection and Quality Control
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Historical development of quality: Quality assurance and total quality
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Historical development of quality: Quality assurance and total quality
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	midterm exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Quality cost relationship
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Internal and External Customer, Customer Satisfaction
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Total quality management tools and goals
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	Elements of total quality management

	Practice :	
	Laboratory :	
	Theoretical :	Professional standards
Week 13	Practice :	
	Laboratory :	
	Theoretical :	The CE mark
Week 14	Practice :	
	Laboratory :	
	Theoretical :	
Week 15	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Assignment	Yes	1	10,00
Individual study before lecture	Yes	14	70,00
Total Hours			100,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	0	0	3	0	4	0	0	0	4	0
2	4	0	0	3	0	3	2	0	0	3	0
3	3	0	0	2	1	2	0	0	0	2	0
4	2	0	0	1	0	2	2	0	0	2	0
5	3	0	0	4	0	3	0	0	0	3	0
6	4	0	0	3	0	3	2	0	0	3	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Computer Aidet Desing 2

General Description

Course Name : Computer Aidet Desing 2

Course Code : EKT 1102

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 1

ECTS : 5

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

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Week 0 Practice :
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Week 0 Practice :
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Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Application / Practice	Yes	10	100,00
Preparation for midterm	Yes	1	9,00
Preparation for final	Yes	1	5,00
Total Hours			134,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	5	5	4	5	0	1	5	5	0	0	1
2	5	5	5	4	0	1	5	5	0	0	1
3	5	5	4	5	0	1	5	5	0	0	1
4	5	5	5	4	0	1	5	5	0	0	1

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Sheet Metal Dying Techniques

General Description

Course Name	:	Sheet Metal Dying Techniques
Course Code	:	EKT 1104
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	4
Laboratory Credits	:	0
Practice Credits	:	2
ECTS	:	8
Name of Lecturer	:	Assoc. Prof. Dr. Abidin ŞAHİNOĞLU
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	
Course Contents	:	
Recommended or Required Reading	:	
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

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Weekly Course Contents

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
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Week 0 Practice :
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Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Attending lectures	Yes	10	100,00
Application / Practice	Yes	12	120,00
Total Hours			240,00
ECTS			8,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	5	5	5	5	0	0	1	4	0	0	1
2	5	5	5	5	0	0	1	4	0	0	1
3	5	5	5	5	0	0	1	4	0	0	1
4	5	5	5	5	0	0	1	4	0	0	1
5	5	5	5	5	0	0	1	4	0	0	1

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Machine Drawing

General Description

Course Name : Machine Drawing

Course Code : EKT 1106

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 1

ECTS : 4

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

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Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
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Week 0	Theoretical	:
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	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Application / Practice	Yes	10	100,00
Total Hours			120,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	5	5	5	4	0	1	5	5	0	0	2
2	5	4	5	5	0	1	5	5	0	0	2
3	5	5	5	4	0	1	5	5	0	0	2
4	5	4	5	5	0	1	5	5	0	0	2

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Material Technology

General Description

Course Name : Material Technology

Course Code : EKT 1108

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 0

ECTS : 3

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

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Weekly Course Contents

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

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Week 0 Practice :
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Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Attending lectures	Yes	10	50,00
Application / Practice	Yes	10	20,00
Total Hours			90,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	4	4	4	4	0	1	4	2	0	0	0
2	5	5	5	5	0	1	3	3	0	0	0
3	4	5	4	5	0	1	5	2	0	0	0
4	5	4	5	4	0	1	4	2	0	0	0
5	4	5	4	5	0	1	5	2	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Strength Of Materials

General Description

Course Name : Strength Of Materials

Course Code : EKT 1110

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 0

ECTS : 3

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

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7 -

Weekly Course Contents

Week 0
Theoretical :
Practice :
Laboratory :

Week 0
Theoretical :
Practice :
Laboratory :

Week 0
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Week 0 Practice :
Laboratory :

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Assignment	Yes	10	50,00
Individual study before lecture	Yes	10	10,00
Preparation for midterm	Yes	1	10,00
Total Hours			90,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	4	3	4	3	0	1	4	3	0	0	1
2	4	4	5	4	0	1	4	3	0	0	1
3	5	5	4	3	0	1	5	3	0	0	0
4	4	4	5	4	0	1	4	4	0	0	2
5	4	5	5	5	0	1	5	2	0	0	0
6	4	4	4	4	0	1	4	2	0	0	1
7	4	5	4	4	0	1	5	4	0	0	1

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Computer Aided Manufacture 1

General Description

Course Name : Computer Aided Manufacture 1

Course Code : EKT 1112

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 1

ECTS : 4

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

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Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

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Week 0 Practice :
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Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Application / Practice	Yes	10	100,00
Total Hours			120,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	4	5	5	5	0	3	4	5	0	0	0
2	4	5	5	5	0	3	4	5	0	0	0
3	4	5	5	5	0	3	5	5	0	0	0
4	3	5	5	5	0	3	4	5	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Environmental Protection

General Description

Course Name : Environmental Protection

Course Code : EKT 1202

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 0

ECTS : 3

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Optional

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
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Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Attending lectures	Yes	14	70,00
Total Hours			90,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	1	1	0	0	1	0	5	0	5	3	4
2	1	1	1	0	1	0	4	0	4	4	5
3	1	1	1	0	1	0	5	0	4	4	4
4	1	1	1	0	1	0	4	0	5	3	5

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
First Aid

General Description

Course Name : First Aid

Course Code : EKT 1204

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 0

ECTS : 3

Name of Lecturer : Assoc. Prof. Dr. Abidin ŞAHİNOĞLU

Type of Course Unit : Optional

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
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Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:
Week 0	Theoretical	:
	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Application / Practice	Yes	14	70,00
Total Hours			90,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	0	0	2	0	0	1	0	1	5	5
2	0	0	0	1	0	0	2	0	1	5	4
3	1	1	1	2	1	1	1	1	1	4	5
4	0	0	0	1	0	0	1	0	1	5	5

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding Entrepreneurship

General Description

Course Name	:	Entrepreneurship
Course Code	:	EKT 1206
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Assoc. Prof. Dr. Abidin ŞAHİNOĞLU
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	
Course Contents	:	
Recommended or Required Reading	:	
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

5 -

Weekly Course Contents

Week 0
Theoretical :
Practice :
Laboratory :

Week 0
Theoretical :
Practice :
Laboratory :

Week 0
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Week 0	Practice	:
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	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	10,00
Final	No	1	10,00
Project	Yes	1	70,00
Total Hours			90,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	1	0	3	2	4	1	4	2	4	1	4
2	1	1	2	2	4	0	3	1	3	1	4
3	0	2	1	4	3	1	3	2	3	2	4
4	0	0	0	4	4	0	5	0	0	0	5
5	1	1	1	4	5	0	3	0	5	0	5

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Computer Aided Manufacture 2

General Description

Course Name	:	Computer Aided Manufacture 2
Course Code	:	EKT 2101
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	4
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	To gain the ability to create the toolpaths for CNC milling machines on 2D and 3D drawings by using the CAM programmes.
Course Contents	:	To define the block to be processed and the 2D 3D designs to the CAM programme, To define the coordinate system, To define the types of operations, cutters and cutting parameters. To generate the toolpath and To obtain the G-codes. To process the tool.
Recommended or Required Reading	:	UGN3 Totorials
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to use the 2D modul of CAD programme

2 - To be able to use the 3D modul of CAD programme

3 - To be able to create the tool way and simulate them.

4 - To be able select the Post Processor and generate G-code

Weekly Course Contents

Week 1	Theoretical	:	UGNX interface, New, Open, Save, Exit
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Drawing commands and workpiece coordinate sytem
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	MCS, Definition of part and block , milling operations
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Rough milling and definition of tools
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Definition of cutting parameters
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Toolpath generation and simulation
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Mid-term exam
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Rest machining
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Finish operations
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Finish operations
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	2,5 Axis milling
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	Drilling
	Practice	:	
	Laboratory	:	

	Theoretical	:	Text machining
Week 13	Practice	:	
	Laboratory	:	
	Theoretical	:	Postprocess and machining
Week 14	Practice	:	
	Laboratory	:	
	Theoretical	:	Final exam
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Assignment	Yes	1	10,00
Attending lectures	Yes	15	60,00
Preparation for midterm	Yes	1	10,00
Preparation for final	Yes	1	20,00
Total Hours			102,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	4	0	0	0	0	0	2	0	3	0
2	3	3	0	0	0	0	4	0	0	0	0
3	0	0	0	0	0	0	0	0	0	2	0
4	0	2	0	0	0	0	4	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Injection Molding

General Description

Course Name : Injection Molding

Course Code : EKT 2103

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 4

Laboratory Credits : 0

Practice Credits : 2

ECTS : 8

Name of Lecturer : Instructor Mustafa KIRMAN

Type of Course Unit : Compulsory

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
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Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Total Hours			0,00
ECTS			0,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	5	3	3	0	0	0	3	2	0	0	0
2	5	2	3	1	0	0	3	3	0	0	0
3	5	3	2	2	0	0	2	3	0	0	0
4	5	2	2	2	0	0	1	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
CNC Milling Technology

General Description

Course Name	:	CNC Milling Technology
Course Code	:	EKT 2105
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	4
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	This course is preparation for work with the conspiracy, CNC milling, the program aims at teaching the competencies to make writing and production.
Course Contents	:	In this course, students will learn the technical drawing rules CNC Machine's parts and features of the work piece to the picture drawn by the işleyebillecektir using the appropriate speed and feed.
Recommended or Required Reading	:	Manual Milling, CNC Milling programming commands, book, computer, computer program for use
Planned Learning Activities and Teaching Methods	:	Lectures, group work, practice, practice again
Recommended Optional Programme Components	:	In this course, students learn what they have learned using the machine industry, cnc milling programmer olabilir.Aynı even more time by making ilerletirse macro program can handle different parts.

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to identify ozero points on parts.

2 - To be able to distinguish the properties of the elements used in reset.

3 - To be able to reset the tool according to the part to be machined.

4 - To be able to comprehend the elements and properties used in tool setting.

5 - To be able to adjust the depth of cut, the angle of operation and the giving of progress.

6 - To be able to calculate the roughness depth of the tool.

7 - To be able to adjust the connecting apparatus.

8 - To be able to use binding control devices.

9 - To be able to do workpiece zeroing methods.

Weekly Course Contents

Week 1	Theoretical	:	CNC Machine's features, components and operating principles
	Practice	:	CNC Machine's features, components and operating principles
	Laboratory	:	CNC Machine's features, components and operating principles
Week 2	Theoretical	:	Coordinate axes of the counter, the reference points Types of control panels, relationship between the cutter and workpiece material
	Practice	:	Coordinate axes of the counter, the reference points Types of control panels, relationship between the cutter and workpiece material
	Laboratory	:	Coordinate axes of the counter, the reference points Types of control panels, relationship between the cutter and workpiece material
Week 3	Theoretical	:	Cutting Types, properties and uses of
	Practice	:	Cutting Types, properties and uses of
	Laboratory	:	Cutting Types, properties and uses of
Week 4	Theoretical	:	Parts on the zero points Cutting depth, angle, and advances in treatment given
	Practice	:	Parts on the zero points Cutting depth, angle, and advances in treatment given
	Laboratory	:	Parts on the zero points Cutting depth, angle, and advances in treatment given
Week 5	Theoretical	:	CNC Milling Machine programming fundamentals
	Practice	:	CNC Milling Machine programming fundamentals
	Laboratory	:	CNC Milling Machine programming fundamentals
Week 6	Theoretical	:	Motion systems, CNC Milling Machine The definition and importance of simulation simulation programs running a program
	Practice	:	Motion systems, CNC Milling Machine The definition and importance of simulation simulation programs running a program
	Laboratory	:	Motion systems, CNC Milling Machine The definition and importance of simulation simulation programs running a program
Week 7	Theoretical	:	Motion systems, CNC Milling Machine The definition and importance of simulation simulation programs running a program
	Practice	:	The definition and importance of simulation simulation programs running a program
	Laboratory	:	The definition and importance of simulation simulation programs running a program
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Programming using CNC milling cycles Circular pocket milling cycle
	Practice	:	Programming using CNC milling cycles Circular pocket milling cycle
	Laboratory	:	Programming using CNC milling cycles Circular pocket milling cycle

	Theoretical	:	Programming using CNC milling cycles a) the drilling cycle b) The tapping cycle c) Hole expansion cycle
Week 10	Practice	:	Programming using CNC milling cycles a) the drilling cycle b) The tapping cycle c) Hole expansion cycle
	Laboratory	:	Programming using CNC milling cycles a) the drilling cycle b) The tapping cycle c) Hole expansion cycle
	Theoretical	:	Sub-programming technique Old programming structure
Week 11	Practice	:	Sub-programming technique Old programming structure
	Laboratory	:	Sub-programming technique Old programming structure
	Theoretical	:	Milling CNC programming using the sub-program
Week 12	Practice	:	Milling CNC programming using the sub-program
	Laboratory	:	Milling CNC programming using the sub-program
	Theoretical	:	CNC Milling Machine in the alarm options
Week 13	Practice	:	CNC Milling Machine in the alarm options
	Laboratory	:	CNC Milling Machine in the alarm options
	Theoretical	:	Measurement and control
Week 14	Practice	:	Measurement and control
	Laboratory	:	Measurement and control
	Theoretical	:	Overview
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	3,00
Final	No	1	3,00
Attending lectures	Yes	16	16,00
Application / Practice	Yes	16	16,00
Laboratory	Yes	10	40,00
Individual study before lecture	Yes	6	6,00
Individual study after lecture	Yes	6	6,00
Homework	Yes	8	8,00
Workshop	Yes	10	20,00
Others	Yes	8	8,00
Total Hours			126,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	3	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	5	3	0	2	0
3	0	2	4	2	0	2	0	0	0	0	0
4	0	0	0	0	0	0	5	0	0	0	0
5	2	0	0	0	2	0	5	0	0	0	0
6	0	2	4	2	0	2	3	3	0	0	0
7	2	3	4	0	0	0	4	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	4	0	0	2	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Hydroulic Pnoumatic

General Description

Course Name	:	Hydroulic Pnoumatic
Course Code	:	EKT 2107
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	1
ECTS	:	4
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Comprehend basic concepts of fluid mechanics, hydrostatics and hydrodynamics. Comprehend operational principles of hydraulic and pneumatic control systems, and set up these control circuits. Set up a hydraulic, electro-hydraulic and pneumatic, electro-pneumatic circuit due to the desired criteria. Maintenance and repair of machine tools to gain relevant qualifications.
Course Contents	:	Basic principles of hydraulics, Hydraulic elements (components) and circuits, Electro-hydraulics circuits, Basic principles of Pneumatic, Pneumatic elements (components) and circuits, Electro-pneumatic circuits
Recommended or Required Reading	:	1.Denktaş, M., Hydraulic and Pneumatic Systems, Undergraduate Publishing 2.Karacan I., Hydraulic and pneumatic, Simav 3. Small M., Hydraulic Pneumatic, Ministry of Education Publications., 4. Power Hydrology, Ministry of National Education Publications., 5. Improvement of hydraulic failure search ability, Ministry of National Education Publications., 6. Improvement of pneumatic failure search ability, Ministry of Education Publications.
Planned Learning Activities and Teaching Methods	:	Lectures, Practical Courses, Presentation, Project, Laboratory Applications
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to draw a hydraulic circuit diagram, to understand the basic elements

2 - To be able to explain the workings of Hydraulic work machines and vans, grinding, injection machines and so on from their drawn circuit diagrams

3 - To be able to recognize electro-hydraulic elements and explain their operation with examples

4 - To be able to know possible defects in hydraulic systems and explain the solution methods of defect

5 - To be able to know the basic elements of pneumatic system and explain their working systems

6 - To be able to symbolize a pneumatic circuit diagram to show basic elements such as compressor, relief valves, control valves

7 - To be able to know the probable failures in pneumatic systems and explain the solution methods of failures

8 - To be able to recognize electro-pneumatic elements and explain their work with examples

Weekly Course Contents

Week 1	Theoretical	:	Understanding the hydraulic circuit elements
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	
	Practice	:	
	Laboratory	:	Hydraulic circuit diagram to create
Week 3	Theoretical	:	
	Practice	:	
	Laboratory	:	Hydraulic and electro-hydraulic circuit diagram to create
Week 4	Theoretical	:	
	Practice	:	Detecting failures in hydraulic systems
	Laboratory	:	
Week 5	Theoretical	:	
	Practice	:	Resolve hydraulic failures
	Laboratory	:	
Week 6	Theoretical	:	Understanding the pneumatic circuit elements Pneumatic circuit diagram to create
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Understanding the pneumatic circuit elements Pneumatic circuit diagram to create
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	
	Practice	:	
	Laboratory	:	Electro-pneumatic circuit diagram to create

Week 10	Theoretical	:	
	Practice	:	Detecting failures in pneumatic systems
	Laboratory	:	
Week 11	Theoretical	:	
	Practice	:	Resolve pneumatic failures
	Laboratory	:	
Week 12	Theoretical	:	
	Practice	:	Make periodic checks of systems
	Laboratory	:	
Week 13	Theoretical	:	
	Practice	:	Periodic maintenance of the systems do
	Laboratory	:	
Week 14	Theoretical	:	
	Practice	:	To repair a defective machine
	Laboratory	:	
Week 15	Theoretical	:	Overview
	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Individual study before lecture	Yes	4	16,00
Individual study after lecture	Yes	8	64,00
Application / Practice	Yes	8	64,00
Total Hours			146,00
ECTS			5,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	0	0	0	0	0	0	0	0	3	0	0
2	0	1	0	0	0	0	0	0	0	2	0
3	0	0	0	0	0	0	0	0	3	0	0
4	0	0	0	0	0	2	0	0	4	0	0

5	0	0	0	0	0	0	0	0	0	3	0
6	0	3	0	0	0	0	0	0	2	0	0
7	0	2	0	0	0	0	0	0	4	3	0
8	0	0	0	0	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Research Methods and Techniques

General Description

Course Name	:	Research Methods and Techniques
Course Code	:	EKT 2109
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	It is aimed that a student who is about to graduate should have ability to make research about his/her profession in depth, to improve himself/herself about his/her study subject, to report and to make influential presentation his/her study in conformity with the determined rules.
Course Contents	:	To study, research, report and make oral presentation on a vocational subject in conformity with scientific study rules and ethics.
Recommended or Required Reading	:	1) Seyidoglu, Halil, Scientific Research and Writing Handbook, Güzem Can Publications, 2003, Istanbul 2) Al, Hamza, Academic Writing Rules of Scientific Research Methods, Sakarya Bookstore, 2007, Sakarya 3) Türkbal, Aydın, Scientific Research Methods and Writing Techniques, Aktif Publishing House, 2003, Istanbul
Planned Learning Activities and Teaching Methods	:	Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to improve the vocational interest and knowledge depth of students

2 - To be able to make independent study and gain capability for selflearning

3 - To be able to improve communication capability and gain capability of harmonic working in a team

4 - To be able to gain knowledge and skills about how reached resources can be used in working

5 - To be able to to reach primary and secondary resources related to research topic

6 - To be able to analyze a scientific subject and divide it into pieces by doing research.

7 - To be able to work on computer, software, internet and questionnaires (project, experiment) which may be necessary in a report or work

8 - To be able to gain the ability of writing a report effectively and in accordance with writing rules

Weekly Course Contents

Week 1	Theoretical	:	Distribution of the study topics to the students
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Introduction to research methods and planning of research
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	To reach primary and secondary resources in researches
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	To arrange the collected resources, text referring and types of referring
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Development of the Project/ Designing a survey/sample surveys/sample projects
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Designing index and chapters in study Preparing and showing of foreword, abstract, figures and graphics
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Designing index and chapters in study Preparing and showing of foreword, abstract, figures and graphics
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Designing the bibliography Checking the conformity to writing rules, and correction of mistakes
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Assessment of results obtained in the study
	Practice	:	

	Laboratory :	
	Theoretical :	Ethics in scientific studies
Week 11	Practice :	
	Laboratory :	
	Theoretical :	Presentation techniques /preparation of presentation
Week 12	Practice :	
	Laboratory :	
	Theoretical :	Collective presentation / workshop
Week 13	Practice :	
	Laboratory :	
	Theoretical :	Collective presentation / workshop
Week 14	Practice :	
	Laboratory :	
	Theoretical :	Overview
Week 15	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Research presentation	Yes	1	1,00
Individual study before lecture	Yes	8	48,00
Total Hours			51,00
ECTS			2,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	0	2	2	0	0	2	0	0	0	0
2	0	2	0	0	2	3	0	0	0	0	0
3	0	0	0	2	0	0	0	2	0	0	0
4	2	0	2	0	0	0	0	0	0	0	0
5	0	2	0	0	2	0	0	0	0	3	0
6	0	0	0	2	0	2	2	2	0	0	0
7	3	0	0	0	0	0	0	0	0	0	0

8	0	0	0	0	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Social Responsibility

General Description

Course Name	:	Social Responsibility
Course Code	:	EKT 2111
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	1
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	1
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	It is expected from students to 1. identify environmental problems like social, natural, cultural and so on. 2. to develop interdisciplinary cooperation for the solution of the problem, 3. Continuity without compromising the process objective, 4. to share their results with the public.
Course Contents	:	In this course, students will learn about social responsibility concept, purpose and importance; The development of social responsibility in society; Civil society organizations and their places in social responsibility, social responsibility projects in the world and in Turkey.
Recommended or Required Reading	:	
Planned Learning Activities and Teaching Methods	:	Lecture, class discussion and application.
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to identify problems that concern social life.

2 - To be able to produce solutions and projects to existing problems.

3 - To be able to make interdisciplinary studies.

4 - To be able to take responsibility in the social field.

Weekly Course Contents

Week 1	Theoretical	:	Social Responsibility Concept, aim and importance
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	History of Social Responsibility
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Development of Social Responsibility
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Relationship between community and social responsibility
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Relationship between individual and social responsibility
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Concept of social responsibility on the basis of occupations Definition, mission and purpose of civil society organizations
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Concept of social responsibility on the basis of occupations Definition, mission and purpose of civil society organizations
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Civil society organizations' place in social responsibility projects midterm
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Social responsibility projects in the world and Turkey
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Phantasmal phases of social responsibility projects
	Practice	:	
	Laboratory	:	

	Theoretical	:	Identification of stıdent projects
Week 12	Practice	:	
	Laboratory	:	
	Theoretical	:	
Week 13	Practice	:	Project presentations
	Laboratory	:	
	Theoretical	:	
Week 14	Practice	:	Project presentations
	Laboratory	:	
	Theoretical	:	Overview
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Assignment	Yes	4	20,00
Quizzes	Yes	1	5,00
Project	Yes	1	4,00
Final	No	1	1,00
Midterms	Yes	1	1,00
Total Hours			31,00
ECTS			1,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	1	2	0	0	2	0	0	2	2	0	0
2	2	1	0	1	0	1	0	1	0	0	0
3	1	0	1	0	2	0	0	0	1	0	0
4	0	0	0	0	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Occupational Health and Safet

General Description

Course Name	:	Occupational Health and Safet
Course Code	:	EKT 2113
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	With this course the students, aimed to gain the competencies required to ensure safety
Course Contents	:	It is aimed to inform the learners about the standards of occupational safety and health education that will be necessary for the student's business life.
Recommended or Required Reading	:	Occupational Health and Safety Dr. Alp Esin, Kardelen Offset, Ankara, 2006.
Planned Learning Activities and Teaching Methods	:	Conferences, presentations, projects, practical lessons, laboruvar (if necessary)
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to take first aid measures

2 - To be able to provide working safety

3 - To be able to take precautions in accordance with work safety legislation

4 - To be able to have knowledge about occupational accidents and occupational diseases

Weekly Course Contents

Week 1 : Theoretical : First Aid training

	Practice	:	
	Laboratory	:	
	Theoretical	:	First Aid training
Week 2	Practice	:	
	Laboratory	:	
	Theoretical	:	First Aid training
Week 3	Practice	:	
	Laboratory	:	
	Theoretical	:	First Aid training
Week 4	Practice	:	
	Laboratory	:	
	Theoretical	:	Provide personal safety
Week 5	Practice	:	
	Laboratory	:	
	Theoretical	:	Provide personal safety
Week 6	Practice	:	
	Laboratory	:	
	Theoretical	:	Provide personal safety
Week 7	Practice	:	
	Laboratory	:	
	Theoretical	:	Midterm-exam
Week 8	Practice	:	
	Laboratory	:	
	Theoretical	:	Ensuring the safety of employees
Week 9	Practice	:	
	Laboratory	:	
	Theoretical	:	The business environment is to provide security
Week 10	Practice	:	
	Laboratory	:	
	Theoretical	:	The business environment is to provide security
Week 11	Practice	:	
	Laboratory	:	
	Theoretical	:	Safety at Work legislation
Week 12	Practice	:	
	Laboratory	:	

	Theoretical	:	Safety at Work legislation
Week 13	Practice	:	
	Laboratory	:	
	Theoretical	:	Safety at Work legislation
Week 14	Practice	:	
	Laboratory	:	
	Theoretical	:	Overview
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Individual study after lecture	Yes	10	100,00
Total Hours			102,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	0	0	0	0	0	3	0	0	0	0	0
2	2	0	0	2	2	0	2	0	2	0	0
3	0	0	2	0	0	3	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	2	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Forging Molding

General Description

Course Name	:	Forging Molding
Course Code	:	EKT 2201
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Teaching of plastic shaping techniques effects on strength and strain behaviors of materials and also its aimed examination of friction and lubrication effects on this techniques
Course Contents	:	Metallurgical principles, strengthening processes, Friction and lubrication, forging, Rolling, Extrusion, Wire drawing
Recommended or Required Reading	:	Służalec A.,Theory of Metal Forming Plasticity: Classical and Advanced Topics, Springer NewYork, 2004 L.Çapan, Metals Plastic Forming, Istanbul, 2003 P. Polukhin, B. Grinberg, S. Kantenik, Metal Process Engineering, University Press of the Pacific, 2003
Planned Learning Activities and Teaching Methods	:	Textbook, powerpoint presentations, whiteboard, assignments
Recommended Optional Programme Components	:	N/A

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to reach the knowledge expansion and depth by doing scientific research in the field of engineering, to evaluate, interpret and apply knowledge

2 - To be able to develop methods to solve engineering problems and applying innovative methods in solutions.

3 - To be able to design and implement analytical, modeling and experimental based research; to analyze and interpret complex situations in this process.

4 - To be able to use the techniques, skills and modern tools necessary for engineering applications

Weekly Course Contents

Week 1	Theoretical	Introduction to plastic shaping methods
	Practice	
	Laboratory	
Week 2	Theoretical	Basic principles of plastic deformation
	Practice	
	Laboratory	
Week 3	Theoretical	Metallurgical principles, strengthening processes
	Practice	
	Laboratory	
Week 4	Theoretical	The factors affecting plastic deformation
	Practice	
	Laboratory	
Week 5	Theoretical	The factors affecting plastic deformation
	Practice	
	Laboratory	
Week 6	Theoretical	Friction and lubrication, surface treatments
	Practice	
	Laboratory	
Week 7	Theoretical	Friction and lubrication, surface treatments
	Practice	
	Laboratory	
Week 8	Theoretical	Annealing furnaces, forging
	Practice	
	Laboratory	
Week 9	Theoretical	Midterm Exam
	Practice	
	Laboratory	
Week 10	Theoretical	Forging, rolling
	Practice	
	Laboratory	
Week 11	Theoretical	Rolling
	Practice	
	Laboratory	

	Theoretical	:	Extrusion
Week 12	Practice	:	
	Laboratory	:	
	Theoretical	:	Extrusion, Wire drawing
Week 13	Practice	:	
	Laboratory	:	
	Theoretical	:	Wire drawing
Week 14	Practice	:	
	Laboratory	:	
	Theoretical	:	Sheet shaping process
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Assignment	Yes	15	15,00
Final	No	1	1,00
Attending lectures	Yes	15	45,00
Individual study before lecture	Yes	15	60,00
Individual study after lecture	Yes	15	60,00
Total Hours			182,00
ECTS			6,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	2	1	2	1	0	1	0	0	0	0
2	2	3	1	2	1	0	2	0	0	0	0
3	2	3	1	2	1	0	1	0	0	1	0
4	1	2	0	2	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Mould Materials and Heat Treatment Information

General Description

Course Name : Mould Materials and Heat Treatment Information

Course Code : EKT 2203

Qualification Level : Short Cycle

Qualification Degree : PreBachelor Degree

Course Language : Turkish

Theoretical Credits : 2

Laboratory Credits : 0

Practice Credits : 0

ECTS : 3

Name of Lecturer : Instructor Mustafa KIRMAN

Type of Course Unit : Optional

Mode of Delivery : Face-To-Face

Prequisite and Co-requisites : N/A

Objectives of the Course :

Course Contents :

Recommended or Required Reading :

Planned Learning Activities and Teaching Methods :

Recommended Optional Programme Components :

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

Weekly Course Contents

Week 0 Theoretical :

Practice :

Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

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Week 0 Practice :
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Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :

	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Total Hours			0,00
ECTS			0,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	3	3	2	0	1	2	1	0	0	0
2	3	3	3	2	0	1	0	1	0	0	0
3	3	2	3	3	2	1	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding Welding Technology

General Description

Course Name	:	Welding Technology
Course Code	:	EKT 2205
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Modern welding methods and their applications to be informed about.
Course Contents	:	The classification of welding methods in industrial production.To be able to comprehend the basic properties of industrial arc welding, , electric arc welding, gas welding, oxy-gas welding, submerged welding and special welding methods.
Planned Learning Activities and Teaching Methods	:	Lectures, Practical Courses, Presentation, Seminar, Project, Laboratory Applications (if necessary)
Recommended or Required Reading	:	Manufacturing procedures, Prof. Assoc. Salahaddin Anık, Prof. Assoc. Adnan Dikicioğlu, Assoc. Dr. Murat Vural, ITU Mechanical Engineering, Birsen Publishing House, 1999.
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to comprehend modern welding methods and application areas.

2 - To be able to investigate the metallurgical properties of weldability and weldability of metals.

3 - To be able to design welded constructions and to make strength calculations.

4 - To be able to understand the importance of quality control in weldment.

Weekly Course Contents

	Theoretical	:	Modern welding methods and application areas.
Week 1	Practice	:	
	Laboratory	:	
	Theoretical	:	Weld capabilities of metals and metallurgical examination of weldability
Week 2	Practice	:	
	Laboratory	:	
	Theoretical	:	Welding machines
Week 3	Practice	:	
	Laboratory	:	
	Theoretical	:	To open welding gap in electric arc welding
Week 4	Practice	:	
	Laboratory	:	
	Theoretical	:	Electric arc welding
Week 5	Practice	:	
	Laboratory	:	
	Theoretical	:	Electric arc welding Blunt, V, overlay and horizontal corner welding processes.
Week 6	Practice	:	
	Laboratory	:	
	Theoretical	:	Electric arc welding Blunt, V, overlay and horizontal corner welding processes.
Week 7	Practice	:	
	Laboratory	:	
	Theoretical	:	Midterm-exam
Week 8	Practice	:	
	Laboratory	:	
	Theoretical	:	Protective gas welding Types of gas used.
Week 9	Practice	:	
	Laboratory	:	
	Theoretical	:	Oxy-gas welding process
Week 10	Practice	:	
	Laboratory	:	
	Theoretical	:	Oxy-gas welding process
Week 11	Practice	:	
	Laboratory	:	
	Theoretical	:	Welded construction, and strength accounts
Week 12	Practice	:	
	Laboratory	:	

	Theoretical	:	Welded construction, and strength accounts
Week 13	Practice	:	
	Laboratory	:	
	Theoretical	:	Quality assurance and control on weld.
Week 14	Practice	:	
	Laboratory	:	
	Theoretical	:	Overview
Week 15	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Attending lectures	Yes	10	50,00
Application / Practice	Yes	10	40,00
Total Hours			92,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	0	2	0	0	2	1	0	0	0	0
2	0	2	0	2	0	0	0	0	0	0	0
3	1	5	2	0	3	0	3	3	0	0	0
4	0	2	0	0	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Cutting Tools Tecnology

General Description

Course Name	:	Cutting Tools Tecnology
Course Code	:	EKT 2207
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	Introducing cutting tools and teaching the parameters to be used in the field of application (cutting speed, progress, rotation etc.).
Course Contents	:	Machining and chip formation,Machinability, tool life, cutting forces and strength,cutting parameters, chip types, effect of temperature on tool, surface roughness and measurement, surface quality calculation,Cutting tool materials, ideal tool properties, tool geometry, effects of saw angle, ISO tool norms according to workpiece materials,Cutting tool selection criteria, docking angle, negative and positive tools, cutting tool and tool standards
Recommended or Required Reading	:	Modern Machining Methods, Prof.Dr. Dr. M. Cemal Çakır, Dora Publishing, Bursa, 2011
Planned Learning Activities and Teaching Methods	:	Homework + Report preparation
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to select suitable cutting tool for manufacturing process.

2 - To be able to make necessary calculations about cutting tool.

3 - To be able to understand general information about cutting tool technologies.

4 - To be able to select ISO tool holders according to workpiece materials.

Weekly Course Contents

Week 1	Theoretical	:	Machining and chip formation
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Machinability concept and machinability parameters
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Tool life and tool life models
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Cutting forces in chip removal, force measurement
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Effects of cutting parameters on chip removal
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Heat and temperature distribution, effects of temperature on the tool
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Heat and temperature distribution, effects of temperature on the tool
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Surface roughness and measurement, calculation of surface quality
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Cutting tool materials
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Ideal tool properties, tool geometry, effects of saw blade angle
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	ISO tool norms according to workpiece materials

	Practice :	
	Laboratory :	
Week 13	Theoretical :	Cutting tool selection criteria and tool selection
	Practice :	
	Laboratory :	
Week 14	Theoretical :	Docking angle, negative and positive sets, corner radii effect
	Practice :	
	Laboratory :	
Week 15	Theoretical :	Cutting tool coating methods and effects of coating Cutter and tool holder standards
	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Attending lectures	Yes	10	20,00
Individual study before lecture	Yes	15	30,00
Individual study after lecture	Yes	15	30,00
Preparation for midterm	Yes	1	5,00
Preparation for final	Yes	1	5,00
Total Hours			92,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	1	1	2	2	0	0	1	0	0	0	0
2	3	2	2	0	2	0	1	0	0	0	0
3	2	1	1	1	1	0	0	0	0	0	0
4	2	2	1	2	1	0	1	0	1	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Advanced Manufacturing Technology 2

General Description

Course Name	:	Advanced Manufacturing Technology 2
Course Code	:	EKT 2209
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The purpose of this course is to give theoretical knowledge about Classify different non-traditional machining processes , Describe the basic mechanism of material removal in non-traditional machining processes and Applications and limitations of non-traditional machining processes . In this course, using of these techniques in industry are also taught by giving examples.
Course Contents	:	Main Properties Of Traditional And Non-Traditional Machining Processes Differences Between Traditional And Non-Traditional Machining Processes And Classification Of Non-Traditional Machining Processes Abrasive Jet Machining (AJM) Ultrasonic Machining (USM) Water-Jet Machining (WJM) Abrasive Water-Jet Machining (AWJM) Electrochemical Machining (ECM), Electrochemical Grinding (ECD) And Electro Jet Machining (EJM) Electrical-Discharge Machining (EDM) Midterm Exam Wire Electrical-Discharge Machining (WEDM) Laser-Beam Machining (LBM), Electron-Beam Machining (EBM) Chemical Machining And Photochemical Machining, Rapid Prototyping
Recommended or Required Reading	:	Lecure Notes. MODERN MANUFACTURES / Fundamentals of Modern Manufacturing: Materials, Processes, and Systems Author (s) Mikell GROOVER, Murat VURAL, Turgut GÜLMEZ
Planned Learning Activities and Teaching Methods	:	Lectures, presentations, homework, report writing.
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to comprehend the properties of traditional and special manufacturing methods

2 - To be able to Understand the differences between traditional and special manufacturing methods

3 - To be able to identify situations that need special manufacturing methods.

4 - To be able to apply working principles in special manufacturing methods.

5 - To be able to understand the applications and limitations of special manufacturing methods.

Weekly Course Contents

Week 1	Theoretical	:	Main Properties Of Traditional And Non-Traditional Machining Processes
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Differences Between Traditional And Non-Traditional Machining Processes And Classification Of Non-Traditional Machining Processes
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Abrasive Jet Machining (AJM)
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Ultrasonic Machining (USM)
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Water-Jet Machining (WJM)
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Abrasive Water-Jet Machining (AWJM) Electrochemical Machining (ECM), Electrochemical Grinding (ECD) And Electro Jet Machining (EJM)
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Abrasive Water-Jet Machining (AWJM) Electrochemical Machining (ECM), Electrochemical Grinding (ECD) And Electro Jet Machining (EJM)
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm Exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Electrical-Discharge Machining (EDM)
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Wire Electrical-Discharge Machining (WEDM)
	Practice	:	

	Laboratory :	
	Theoretical :	Laser-Beam Machining (LBM), Electron-Beam Machining (EBM)
Week 11	Practice :	
	Laboratory :	
	Theoretical :	Chemical Machining And Photochemical Machining, Rapid Prototyping
Week 12	Practice :	
	Laboratory :	
	Theoretical :	Assignment control
Week 13	Practice :	
	Laboratory :	
	Theoretical :	Assignment control
Week 14	Practice :	
	Laboratory :	
	Theoretical :	Overview
Week 15	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	25,00
Final	No	1	55,00
Total Hours			80,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	2	0	1	0	1	2	0	0	0	0
2	1	2	0	0	1	0	0	2	0	0	0
3	3	1	2	2	1	0	0	1	0	0	0
4	2	0	1	0	1	0	0	1	0	0	0
5	0	2	0	0	1	0	1	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Special Manufacturing Methods

General Description

Course Name	:	Special Manufacturing Methods
Course Code	:	EKT 2211
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The purpose of this course is to give theoretical knowledge about Classify different non-traditional machining processes , Describe the basic mechanism of material removal in non-traditional machining processes and Applications and limitations of non-traditional machining processes . In this course, using of these techniques in industry are also taught by giving examples.
Course Contents	:	To be able to comprehend the basic properties of advanced welding methods used in industrial production , various non-traditional production methods of electro erosion, chemical etching and laser cutting .
Recommended or Required Reading	:	Special ManufacturingTechniques, Mehmet Brief, Simav, Bursa, 2002.
Planned Learning Activities and Teaching Methods	:	Lectures, presentations, homework, report writing.
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to comprehend the properties of traditional and special manufacturing methods.

2 - To be able to Understand the differences between traditional and special manufacturing methods.

3 - To be able to identify situations that need special manufacturing methods.

4 - To be able to apply working principles in special manufacturing methods.

5 - To be able to understand the applications and limitations of special manufacturing methods.

Weekly Course Contents

Week 1	Theoretical	:	Main Properties Of Traditional And Non-Traditional Machining Processes
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	Differences Between Traditional And Non-Traditional Machining Processes And Classification Of Non-Traditional Machining Processes
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Abrasive Jet Machining (AJM)
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	Ultrasonic Machining (USM)
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	Water-Jet Machining (WJM) Abrasive Water-Jet Machining (AWJM)
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Electrochemical Machining (ECM), Electrochemical Grinding (ECD) And Electro Jet Machining (EJM)
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Electrochemical Machining (ECM), Electrochemical Grinding (ECD) And Electro Jet Machining (EJM)
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Midterm Exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Electrical-Discharge Machining (EDM)
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Wire Electrical-Discharge Machining (WEDM)
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Wire Electrical-Discharge Machining (WEDM)
	Practice	:	

	Laboratory :	
Week 12	Theoretical :	Laser-Jet Machining, Electro-Ray Machining
	Practice :	
	Laboratory :	
Week 13	Theoretical :	Laser-Jet Machining, Electro-Ray Machining
	Practice :	
	Laboratory :	
Week 14	Theoretical :	Chemical Machining And Photochemical Machining, Rapid Prototyping
	Practice :	
	Laboratory :	
Week 15	Theoretical :	Chemical Machining And Photochemical Machining, Rapid Prototyping
	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Attending lectures	Yes	14	14,00
Midterms	Yes	1	3,00
Final	No	1	3,00
Individual study before lecture	Yes	14	14,00
Individual study after lecture	Yes	14	28,00
Preparation for midterm	Yes	1	8,00
Preparation for final	Yes	1	12,00
Homework	Yes	2	14,00
Total Hours			96,00
ECTS			3,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	2	0	2	2	0	1	1	0	0	0
2	1	2	0	0	1	2	1	0	0	0	0
3	2	2	0	1	1	0	0	0	0	0	0
4	2	1	0	2	0	2	0	0	0	0	0
5	1	2	0	0	0	0	1	1	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Plastic Blow Molding and Extrusion

General Description

Course Name	:	Plastic Blow Molding and Extrusion
Course Code	:	EKT 2213
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	2
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	3
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Optional
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	
Course Contents	:	
Recommended or Required Reading	:	
Planned Learning Activities and Teaching Methods	:	
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 -

2 -

3 -

4 -

Weekly Course Contents

Week 0 Theoretical :

Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

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Week 0 Practice :
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Theoretical :
Week 0 Practice :
Laboratory :

Theoretical :
Week 0 Practice :
Laboratory :

	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:
	Theoretical	:
Week 0	Practice	:
	Laboratory	:

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Total Hours			0,00
ECTS			0,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	3	2	2	1	0	0	1	0	0	0	0
2	2	1	0	2	0	1	0	0	0	0	0
3	2	2	0	1	2	0	0	2	0	0	0
4	2	1	2	3	0	0	2	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Vocational Training in Workplace

General Description

Course Name	:	Vocational Training in Workplace
Course Code	:	MYO 2002
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	5
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	18
Name of Lecturer	:	Instructor Mustafa KIRMAN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	To develop students' knowledge, skills, attitudes and working habits in their learning periods, skills and experiences in laboratory and workshop practices, to provide their responsibilities, relationships, organization and production processes and new technologies to learn.
Course Contents	:	To find opportunity to apply their knowledge in public or private organizations in accordance with the lessons they have seen, to apply production and service processes in the workplace.
Recommended or Required Reading	:	Manisa Celal Bayar University Sector Applications Education Directive (https://sus.cbu.edu.tr/ISS/Application/Content/HomePage/Files/SUS-Yonerge.pdf)
Planned Learning Activities and Teaching Methods	:	Lecture, Drilland Practice, Demonstration, Show Work, Group Work, Experimental / Laboratory, Individual Study, Project Based Learning
Recommended Optional Programme Components	:	

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to prepare for business

2 - To be able to be ready to group work

3 - To be able to improve knowledge and skill of production methods

4 - To be able to understand the importance of quality and control in manufacturing

Weekly Course Contents

Week 1	Theoretical	:	Introducing the internship, studying the physical possibilities of the employer. Orientation. Examination of work flow charts.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 2	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 3	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 4	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 5	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 6	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 7	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 8	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 9	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	
Week 10	Theoretical	:	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice	:	Inspection, observation and reporting of work done.
	Laboratory	:	

Week 11	Theoretical :	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice :	Inspection, observation and reporting of work done.
	Laboratory :	
Week 12	Theoretical :	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice :	Inspection, observation and reporting of work done.
	Laboratory :	
Week 13	Theoretical :	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice :	Inspection, observation and reporting of work done.
	Laboratory :	
Week 14	Theoretical :	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice :	Inspection, observation and reporting of work done.
	Laboratory :	
Week 15	Theoretical :	To do maintenance, repair and assembly applications related to the field of industry. Making related applications.
	Practice :	Inspection, observation and reporting of work done.
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Application / Practice	Yes	15	120,00
Internship-Competency	Yes	15	60,00
Field study	Yes	15	120,00
Short cycle-Practice	Yes	15	120,00
Short cycle-Theoretical	Yes	15	60,00
Workshop	Yes	15	60,00
Total Hours			540,00
ECTS			18,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	2	1	4	3	1	2	2	3	1	2	0
2	0	0	0	0	0	2	0	3	1	0	0
3	0	0	0	0	3	0	3	0	0	0	3

4	0	0	0	0	0	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Atatürk's Principles and History of Revolution

General Description

Course Name	:	Atatürk's Principles and History of Revolution
Course Code	:	AİT 2102
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	4
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	4
Name of Lecturer	:	Instructor SERKAN CANSEVEN
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	1 - Ataturk's principles and reforms, independent, democratic and secular training of generations 2 - Turkish youth, to gain confidence in national history and consciousness 3 - Basic understand the dynamics of Turkish Modernization
Course Contents	:	1 - Principles of Atatürk and purpose of the course, taught 2 - The causes of decay of the Ottoman Empire 3 - World War I and the results 4 - Response to the occupation and Mustafa Kemal Pasha 5 - National Pact and T.B.M.M. 's opening 6 - Wars and the Treaty of Lausanne
Recommended or Required Reading	:	1- Sound, I, II, III 2- Atatürk's Lectures and Statements I, II, III 3- Ataturk Way Professor Dr. Turan Feyzioğlu Professor Dr. Hamza Eroğlu Professor Dr. Mustafa Aysan 4- Çankaya Falih Rıfkı Atay 5- Atatürk's Principles and History of Turkish Revolution Professor Dr. Refik Turan Professor Dr. Mustafa Safran Professor Dr. Necdet Hayta
Planned Learning Activities and Teaching Methods	:	Maps, Computers, Slideshow, DVD, VCD
Recommended Optional Programme Components	:	None

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to comprehend developments in European history and Ottoman modernization

2 - To be able to decline the Ottoman Empire to explain the reasons

3 - To be able to learn the causes and consequences of World War I

4 - To be able to understand Turkish National Struggle,

5 - To be able to understand the foundation philosophy of the Republic of Turkey better

Weekly Course Contents

Week 1	Theoretical	:	Reading for the Purpose of the Atatürk Principles and Revolution History Class The Fall of the Ottoman Empire
	Practice	:	
	Laboratory	:	
Week 2	Theoretical	:	The Fall of the Ottoman Empire Administrative Reforms and I. Constitutionalism
	Practice	:	
	Laboratory	:	
Week 3	Theoretical	:	Reasons for the Monarchy and the Turkish Revolution
	Practice	:	
	Laboratory	:	
Week 4	Theoretical	:	World War I and the Armistice Agreement
	Practice	:	
	Laboratory	:	
Week 5	Theoretical	:	General Situation of the country against the occupation Mustafa Kemal Pasha's Response
	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Mustafa Kemal Pasha at Samsun and The Congresses
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Mustafa Kemal Pasha at Samsun and The Congresses
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Mid-term\exam
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Opening of Meclis-i Mebusan and Misak-ı Milli
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	T.B.M.M.'s Opening and Structure
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Facades, I. and II. Inonu, Sakarya War, The Great Raid, The Treaty of Mudanya
	Practice	:	

	Laboratory :	
Week 12	Theoretical :	The Treaty of Lausanne
	Practice :	
	Laboratory :	
Week 13	Theoretical :	Proclamation of the Republic, Turkey's geopolitical position
	Practice :	
	Laboratory :	
Week 14	Theoretical :	Foreign Policy of the Republic of Turkey
	Practice :	
	Laboratory :	
Week 15	Theoretical :	Overview
	Practice :	
	Laboratory :	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Attending lectures	Yes	14	28,00
Preparation for midterm	Yes	1	3,00
Preparation for final	Yes	1	3,00
Midterms	Yes	1	1,00
Final	No	1	1,00
Individual study before lecture	Yes	14	42,00
Individual study after lecture	Yes	14	42,00
Total Hours			120,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	1	0	1	0	0	0	0	0	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Turkish Language

General Description

Course Name	:	Turkish Language
Course Code	:	TDL 2102
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	4
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	4
Name of Lecturer	:	Lecturer MUSTAFA YEMİŞ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The overall objective of this course, individuals who understand the subtlety and depth listening, and reading the Turkish language-rich, well-established and productive to show that a language, language and consciousness awaken love, pleasure and acquire the habit of reading, to adopt the core values of Turkish society; briefly thinking and communication skills of individuals to develop.
Course Contents	:	Each student in the graduate and undergraduate education, according to comprehend the main language structure and function of language-thought in terms of connectivity, through written and oral expression, the Turkish right and gain the ability to use beautiful, these rules and native speakers of the language in an awareness of judges and they will have to make. The perfect way to express ideas in accordance with the purpose of rhetoric, including the necessary rules (speaking) knowledge of each profession for educated young people has become a very important need. In this regard, given to institutions of higher education courses in Turkish language, Turkish, and literature courses in high schools as a continuation of the rhetoric, especially in the field will be useful to intensify. On the other hand, a written essay as well as young people, to acquire the habit of speaking correctly and effectively is an issue that should not be neglected. Western countries, drawing upon the books written on this topic, Turkish course programs to address the audience, it is possible to teach techniques and methods of the rule. In this regard, particularly as Ataturk, the Turkish speecher's valuable speech will be taken to benefit from the texts.
Recommended or Required Reading	:	Aksan, Dogan, Every Direction Language / Linguistics with Main Lines, c.1,2,3, Turkish Language Institution, 1979-1982 Aksoy, Ömer Asım, Dictionary of Proverbs, İnkilap Bookstore, January 1988 Aksoy, Ömer Asım, Dictionary of Idioms, İnkilap Bookstore, January 1988 Atatürk, Mustafa Kemal, Speech Banguoğlu, Tahsin, Turkish Grammer, Turkish Language Institute Publications, 2000 Bozkurt, Fuat, Turkish, Istanbul, 1975 Buckley, Reid, Speaking at the Community, System Publishing, May 2001 Dilçin, Cem, New Screening Dictionary, Ankara, 1983 Ergin, Muharrem, Turkish Language for Universities, Bayrak Publications, 2002 Gencan, Tahir Nejat, Grammar, Ayraç Publishing House, October 2001 Karaalioğlu, Seyit Kemal, Composition Art, Istanbul, January 1999 Karahan, Leyla, Türkçede Syntax, Akçağ Publications, 1999 Kudret, Cevdet, Literature Information by Examples, c. 1, 2, İnkılap Bookstore, 198(Koç, Nurettin, New Grammar, Istanbul, 1990 Moran, Berna, A Critical Look at Turkisl Names, c. 1, 2, 3, Communication Publications, 1983-1994 Özdemir, Emin, Güzel an

Effective Speech Art, Remzi Bookstore, January 1999 Özen, Mustafa Nihat, Introduction to Writing Art and Composition, İstanbul, 1971

Planned Learning Activities and Teaching Methods : Description, discussion, presentation, brainstorming.

Recommended Optional Programme Components : N/A

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to explain the characteristics of Turkish language by sensing its usage procedure with examples.

2 - To be able to express the function, dimensions of language and its relationship with thought, culture, and society.

3 - To be able to distinguish between the concepts of spoken language and written language;

4 - To be able to analyze a text they read or follow a program they watch.

5 - To be able to correctly and affectively express their feelings, thoughts, impressions, observations both in written and spoken language.

6 - To be able to identify the historical background of Turkish and its location among world languages;

7 - To be able to apply the basic concepts of morphology;

8 - To be able to explain the concepts about syntax and semantics.

9 - To be able to identify the mistakes in the usage of the language and show them on the texts.

10 - To be able to become an individual who is tolerant and cares about his values, and also, someone who can find solutions to the problems and correctly express his ideas about these problems both in written and spoken language.

Weekly Course Contents

Week 1	Theoretical :	What is language? In people's life the importance of language as a social institution. Relationship between language and culture
	Practice :	
	Laboratory :	
Week 2	Theoretical :	Language in terms of structure and origin. Place of Turkish language among world languages.
	Practice :	
	Laboratory :	
Week 3	Theoretical :	The development of Turkish written language. Historical stages of Turkish written language.
	Practice :	
	Laboratory :	
Week 4	Theoretical :	The current status of the Turkish language, expansion areas of the Turkish language.
	Practice :	
	Laboratory :	
Week 5	Theoretical :	Phonetic, sounds in Turkish and its classification.

	Practice	:	
	Laboratory	:	
Week 6	Theoretical	:	Turkish sound features and sound knowledge of the rules The structure of syllables in Turkish, syllable types, stress and intonation
	Practice	:	
	Laboratory	:	
Week 7	Theoretical	:	Midterm-exam
	Practice	:	
	Laboratory	:	
Week 8	Theoretical	:	Spelling rules and application. Mid-term exam.
	Practice	:	
	Laboratory	:	
Week 9	Theoretical	:	Spelling rules and application. Mid-term exam.
	Practice	:	
	Laboratory	:	
Week 10	Theoretical	:	Punctuation and its applications.
	Practice	:	
	Laboratory	:	
Week 11	Theoretical	:	Morphology, lexis structure, word formation.
	Practice	:	
	Laboratory	:	
Week 12	Theoretical	:	Construction and suffixes, word analysis.
	Practice	:	
	Laboratory	:	
Week 13	Theoretical	:	The word types. Noun, adjective.
	Practice	:	
	Laboratory	:	
Week 14	Theoretical	:	The word types. Adverb, pronouns, prepositions, conjunctions and interjections
	Practice	:	
	Laboratory	:	
Week 15	Theoretical	:	The word types. Verbs, gerunds, infinitives, active-passive.
	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Assignment	Yes	1	4,00
Final	No	1	1,00
Attending lectures	Yes	14	28,00
Individual study before lecture	Yes	14	42,00
Individual study after lecture	Yes	14	42,00
Preparation for midterm	Yes	1	4,00
Preparation for final	Yes	1	4,00
Total Hours			126,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	4	0	0	0	0	0	4	0	0	0	0
2	0	0	0	0	0	0	3	0	3	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	4	3	4	3	0	0	4	0	0	0	0
5	3	4	3	0	0	0	4	0	4	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	3	0	0	0	0	0	0	0	0	0	0
9	4	4	3	4	0	0	3	0	0	0	0
10	3	0	0	3	3	0	3	0	0	2	0

MANİSA VOCATIONAL SCHOOL OF TECHNICAL SCIENCES - Industrial Molding
Foreing Language

General Description

Course Name	:	Foreing Language
Course Code	:	YDI 2102
Qualification Level	:	Short Cycle
Qualification Degree	:	PreBachelor Degree
Course Language	:	Turkish
Theoretical Credits	:	4
Laboratory Credits	:	0
Practice Credits	:	0
ECTS	:	4
Name of Lecturer	:	Instructor EMEL GENÇ
Type of Course Unit	:	Compulsory
Mode of Delivery	:	Face-To-Face
Prequisite and Co-requisites	:	N/A
Objectives of the Course	:	The aim of this course is to provide the first year students with the opportunity of getting familiar with basic English
Course Contents	:	Elementary level vocabulary, grammar and four skills of English.
Recommended or Required Reading	:	Headway-Elementary (Oxford)
Planned Learning Activities and Teaching Methods	:	Lecture, 2: Question-Answer, 3: Discussion, 4: Drills and Practice
Recommended Optional Programme Components	:	N/A

Learning Outcomes

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences ;

1 - To be able to understand basic English grammar.

2 - To be able to grasp the meaning of basic vocabulary.

3 - To be able to speak, read and write in English at Elementary Level.

4 - To be able to introduce yourself.

Weekly Course Contents

Week 1	Theoretical	: regular/irregular verbs

	Practice	:	Writing telling a story
	Laboratory	:	
	Theoretical	:	Unit 7 Introducing people time expressions
Week 2	Practice	:	reading sıxty years of flight
	Laboratory	:	
	Theoretical	:	unit 8 countable and uncountable nouns how much/how many
Week 3	Practice	:	reading and speaking "The history of the sandwich" okuma parçasını okuyup anlamak Your favourite recipe bahsetmek
	Laboratory	:	
	Theoretical	:	some/any
Week 4	Practice	:	Listening "What's your favourite sandwich"
	Laboratory	:	
	Theoretical	:	unit 9 Comparatives Have got/has got Superlatives
Week 5	Practice	:	Reding " Mega cities"
	Laboratory	:	
	Theoretical	:	adjectives Unit 10 Present continuous tense in/on/at
Week 6	Practice	:	Describing a flat Writing Comparing people you know
	Laboratory	:	
	Theoretical	:	Midterm Exam
Week 7	Practice	:	
	Laboratory	:	
	Theoretical	:	Present continuous tense in/on/at Simple present& present continuous
Week 8	Practice	:	
	Laboratory	:	
	Theoretical	:	Present continuous tense in/on/at Simple present& present continuous
Week 9	Practice	:	Reading "Living in Space"
	Laboratory	:	
	Theoretical	:	Unit 11 going to/will making suggestions
Week 10	Practice	:	Writing Describing a holiday"
	Laboratory	:	
	Theoretical	:	Unit 11 Simple past& present perfect
Week 11	Practice	:	speaking Talking about you Have you ever .....?
	Laboratory	:	
	Theoretical	:	Simple past& present perfect tense revision
Week 12	Practice	:	Talk Survey 'What can you do?' Reading and speaking 'Super Children' Writing letters for business applicants.
	Laboratory	:	

Week 13	Theoretical	:	Unit 6 could Was born homonym for
	Practice	:	Using 'could' for past skills. Define where and when you are born. Finding the same pronounced different words.
	Laboratory	:	
Week 14	Theoretical	:	Revision
	Practice	:	Overview
	Laboratory	:	
Week 15	Theoretical	:	Overview
	Practice	:	
	Laboratory	:	

ECTS Workload

Activity Type	Is in Semester	Number	Calculated Activity Workload
Midterms	Yes	1	1,00
Final	No	1	1,00
Attending lectures	Yes	12	36,00
Individual study before lecture	Yes	12	36,00
Individual study after lecture	Yes	12	36,00
Preparation for midterm	Yes	12	12,00
Total Hours			122,00
ECTS			4,00

Program and Learning Outcomes Relations

	1	2	3	4	5	6	7	8	9	10	11
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0