SYLLABUS

Mechanical Engineering

### ATT 1001 Calculus Compulsory A D D G G Thursyday: 13 Th	Course Code		Course N	Name	Course Type	Wee	kly Cou	urse	Credits	ECTS	Weekly Time& Classroom
Prerequisite Prerequisite to 17:00 & Fried 17:00 & Fried					7,00	Т	Α	L		20.0	Schedule
Course Lecture Teaching Assistant(s) E-mail mehmet.oxdemir@marmara.edu.tr Phone N/A Course Objectives Objective of the course is that students gain the necessary mathematical concpets and skills for mathematical analysis and engineering "Thomas' Calculus" Ross L. Finney, Maurice D. Weir, and Frank R. Giardono, 14th Edition, Pearson. Calculus, J. Stewart, Cengage Learning. Calculus, J. Stewart, Cengage Learning. Teaching methods online platform with white board, Power Point Presentations. In this course, learning outcomes will be followed using online tools. Students who will enroll this course in the summer school 2021 semester are required to follow the course by becoming a member of the system, which will be announced by the faculty member. WEEK Date ToPICS Week 1 5.08.2021 Preliminary Concepts, Single-variable Functions and their Graphs Week 2 12.08.2021 Limit concept, Limit Laws Week 2 12.08.2021 Limit and Contunity Week 3 19.08.2021 Derivative concept Week 4 26.08.2021 Limit and Contunity Week 5 2.09.2021 Applications of Derivative Week 6 2.09.2021 Applications of Derivative Week 6 10.09.2021 Techniques of Integration Week 7 16.09.2021 Applications of Integration Week 7 16.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 7 16.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 9 17.09.2021 Applications of Integration Week 9 21.09.2021 Applications of Integration	MATH 1001		Calcul	us I	Compulsory	4	0	0	6	6	Thursyday: 13:00 17-00 & Friday
Teaching Assistant(s) N/A Office Hours Schedule N/A	Prerequisite				Prereq	uisite	e to				14.00-18:00
Assistant(s) E-mail mehmet.ozdemir@marmara.edu.tr Phone N/A Office / Room No N/A Off	Course Lecturer	Asst. Prof. Dr. Me	hmed Rat	fet ÖZDEMİR							•
Phone N/A Course Objectives of the course is that students gain the necessary mathematical concpets and skills for mathematical analysis and engineering "Thomas' Calculus" Ross L. Finney, Maurice D. Weir, and Frank R. Giardono, 14th Edition, Pearson. Teathooks and/or References "Calculus" Stanley Grossman, Saunder College Publishing. In online platform with white board, Power Point Presentations. In this course, learning outcomes will be followed using online tools. Students who will enroll this course in the summer school 2021 semester are required to follow the course by becoming a member of the system, which will be announced by the faculty member. WEEK Date TOPICS Week 1 5.08.2021 Preliminary Concepts, Single-variable Functions and their Graphs Week 2 12.08.2021 Limit concept, Limit Laws Week 2 13.08.2021 Limit and Contuinity Week 3 19.08.2021 Derivative Concept Week 4 26.08.2021 Derivative Rules Week 4 27.08.2021 Applications of Derivative Week 5 2.09.2021 Applications of Derivative Week 6 9.09.2021 Techniques of Integration Week 7 16.09.2021 Techniques of Integration Week 7 17.09.2021 Applications of Integration Week 8 21.09.2021 Techniques of Integration Week 9 17.09.2021 Applications of Integration Week 7 17.09.2021 Applications of Integral Week 8 21.09.2021 Techniques of Integration Week 7 17.09.2021 Applications of Integral Week 8 21.09.2021 Techniques of Integration Week 9 17.09.2021 Applications of Integral Week 9 21.09.2021 Techniques of Integral Week 9 17.09.2021 Applications of Integral Week 9 17.09.2021 Applications of Integral		N/A					- 1			N/A	
Course Objectives Objective of the course is that students gain the necessary mathematical concpets and skills for mathematical analysis and engineering "Thomas' Calculus" Ross L. Finney, Maurice D. Weir, and Frank R. Giardono, 14th Edition, Pearson. Calculus, J. Stewart, Cengage Learning. "Calculus" Stanley Grossman, Saunder College Publishing. In online platform with white board, Power Point Presentations. In this course, learning outcomes will be followed using online tools. Students who will enroll this course in the summer school 2021 semester are required to follow the course by becoming a member of the system, which will be announced by the faculty member. WEEK Date TOPICS Week 1 5.08.2021 Preliminary Concepts, Single-variable Functions and their Graphs Week 2 12.08.2021 Indeterminate forms Week 3 19.08.2021 Umit and Contuinity Week 3 19.08.2021 Derivative concept Week 4 26.08.2021 Applications of Derivative Week 5 2.09.2021 Applications of Derivative Week 5 3.09.2021 Integral concept Week 6 9.09.2021 Techniques of Integration Week 7 16.09.2021 Techniques of Integration Week 7 17.09.2021 Applications of Integration Week 7 17.09.2021 Applications of Integration Week 8 21.09.2021 Techniques of Integration Week 7 17.09.2021 Applications of Integration Week 7 17.09.2021 Applications of Integration Week 8 21.09.2021 Techniques of Integration Week 7 17.09.2021 Applications of Integration Week 8 21.09.2021 Applications of Integration Week 7 17.09.2021 Applications of Integration	E-mail	mehmet.ozdemir@	marmara.	edu.tr				scned	auie		
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SYLLABUS

Mechanical Engineering

2020-2021 Summer School

		2020-202	1 Summer S	CHO	UI				
Course Code		Course Name	Course Type		kly Course Hours	Credits	ECTS	Weekly Time& Classroom	
				Т	A L			Schedule	
EE 2034	Fundamentals	s of Electrical and Electronic Engineering	Compulsory	6	0 0	5	5	Wednesday 16:00-18:50 Thursday	
Prerequisite	N/A		Prereq	uisite	e to			16.00-18:50	
Course Lecturer	Asst. Prof. Dr. İbra	ahim Sina Kuseyri							
Teaching Assistant(s)	N/A				I -	ice Hours edule	N/A		
E-mail	sina.kuseyri@marm	nara.edu.tr			3011	euule			
Phone	N/A				Off	ice / Room No	N/A		
Course Objectives	The aim of the co	urse is to teach the fundamentals	s of electrical	and	electror	nic engineer	ing to non-EE engineeri	ng students	
	Electrical Enginee	ering: Principles and Applications,	A.R. Hamble	y, Pe	arson.				
Textbooks									
and/or References									
Teaching methods	online Pearson M	n with white board, Power Point F lyLab tools. Students who will enr colling to the system with an addi	oll this cours	e in t	the sum	mer school	2021 semester are requ	ired to follow	
WEEK	Date				TOPIC	S			
Week 1	8/3/2021	Introduction and Preliminary Co	oncepts						
Week 1	8/4/2021	Resistive Circuits							
Week 2	8/10/2021	Resistive Circuits							
Week 2	8/11/2021	Capacitance and RC Circuits							
Week 3	8/17/2021	Inductance and RL Cicuits							
Week 3	8/18/2021	Circuit Analysis with Governing	Laws						
Week 4	8/24/2021	Circuit Analysis with Governing	Laws						
Week 4	8/25/2021	Midterm Exam							
Week 5	8/31/2021	AC Circuit Fundamentals							
Week 5	9/1/2021	Frequency Response of Electirc	al Circuits						
Week 6	9/7/2021	Analog Filters							
Week 6	9/8/2021	Introduction to Electronics							
Week 7	9/14/2021	Diodes and Transistors							
Week 7	9/15/2021	Operational Amplifiers and Apli	cations						
Week 8	9/21/2021	Final Exam							
eral	Hatton C	Evaluation Tool Midterm Exam Homework Final Exam	Quantity		Da	ite	Weight in Total (%)	Weight in Semester Evaluation (9	
Eval	dals CRSITES	Midterm Exam	1		We	ek 4	30 50		
	UNIVERKULIMI	Homework	5		Conti	nuous	30	50	
ARMARA	LIK BOLU	Final Exam	1			ek 8	40		

Mehmed Rafet
Özdemir

Metni buraya yazın

SYLLABUS

Mechanical Engineering

Course Code		Course Nam	ne	Course Type	100000000000000000000000000000000000000	kly Course Hours	Credits	ECTS	Weekly Time& Classroom Schedule
ME 3061		Fluid Mecha	nics	Compulsory		0 0	6	, 6	Tuesday 16:00-2
Prerequisite	N/A			Prereq	uisite	to	ME 3071		13.00-17:00
Course Lecturer	Asst. Prof. Dr. M	ehmed Rafet	ÖZDEMİR						
Teaching Assistant(s)	N/A						ce Hours	N/A	
E-mail	mehmet.ozdemir@	@marmara.edu	.tr			Sche	edule		
Phone	N/A					Offic	e / Room No	N/A	
Objectives	fluid dynamics. T	he course inc		me, differential	and	dimensi	onal metho	and their properties, fluods used for formulations.	
	Fluid Mechanics	, R. C. Hibbele	er, Pearson.						
Textbooks and/or References	Çengel. Y. A., Cin	nbala, J. M., F	luid Mechanics: Fui	ndamentals and	d Apı	olication	s, McGraw	-Hill.	
	Fluid Mechanics,	F.M. White, I	McGraw-Hill.						
methods	online tools. Stud	dents who wil		in the summer	scho	ool 2021	semester	outcomes will be follow are required to follow t	
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				Concepts		-			
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Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 4 Week 5 Week 5 Week 6 Week 6 Week 7 Week 7 Week 8	3.08.2021 4.08.2021 10.08.2021 11.08.2021 17.08.2021 18.08.2021 24.08.2021 25.08.2021 31.08.2021 7.09.2021 7.09.2021 14.09.2021 15.09.2021 21.09.2021	Pressure Di Pressure Di Fluid Statics Fluid Statics Integral Rel Integral Rel Midterm Ex Differential Viscous flow Midterm Ex Analysis and Analysis and Final Exam	n and Preliminary C stribution in the flu stribution in the flu s s ations in Control Vo ations in Control Vo ations in Control Vo ations in Control win ducts w in ducts w in ducts at an II d Design for Pipe Fl	Concepts Jid Jid Jolumes Jolumes Jolumes Jow Jow Jow Jow Jow Jow Jow Jo		ГОРІС	e	Weight in Total (%)	Semester
Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 4 Week 5 Week 5 Week 6 Week 6 Week 7 Week 7 Week 8	3.08.2021 4.08.2021 10.08.2021 11.08.2021 17.08.2021 18.08.2021 24.08.2021 25.08.2021 31.08.2021 1.09.2021 7.09.2021 8.09.2021 14.09.2021 15.09.2021	Pressure Di Pressure Di Fluid Statics Fluid Statics Integral Rel Integral Rel Midterm Ex Differential Viscous flow Midterm Ex Analysis and Analysis and Final Exam	n and Preliminary C stribution in the flu stribution in the flu s s ations in Control Vo ations in Control Vo ations in Control Vo ations in Control win ducts w in ducts w in ducts at an II d Design for Pipe Fl	Concepts uid uid olumes olumes olumes ol Volumes ow ow ow Quantity		Dat	e 4,6		Semester Evaluation (%

SYLLABUS

Mechanical Engineering

2020-2021 Summer School

Weekly Course

Weekly Time&

Evaluation (%)

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Course Code		Course Name	Course Type	- F	Hours A L	Credits	ECTS	Classroom Schedule
ME 3071		Heat Transfer	Compulsory	4	0 0	6	6	Tuesday 12:00-1
Prerequisite	ME 3071		Prerequ	uisite	to	N/A		Wednesday: 09.00-1300
Course Lecturer	Prof. Dr. Bayram	ŞAHİN	l .					
Teaching Assistant(s)	N/A		1			ice Hours nedule	N/A	
E-mail	baysahin@yild	iz.edu.tr			0#	ice/Room		
Phone	N/A				No)	N/A	
Course Objectives	for each. 2. To g	eat transfer modes, condition physical interpretation and solve mathematical modern	skills of thermal syst	ems	by usi	ngthe princip	oles of heat transfer .3	3.To provide the
T 4 1	Heat Transfer ,Y.	A. <;engel and A. Ghajar, N	McGrawHi∥.					
Textbooks and/or References	Introduction to H	eat Transfer,Incropera an	d DeWitt, Wiley.					
References	HeatTransfer I	P. Holman, McGraw-Hill.						
	Ticat transici, s.	·						
Teaching methods	In online platform online tools. Stud	n with white board,Power lents who will enroll this co liber of the system, which w	ourse in the summer	scho	ol 202	1 semester a		_
•	In online platform online tools. Stud	n with white board,Power lents who will enroll this co	ourse in the summer	scho the f	ol 202	1 semester a member.		_
methods	In online platform online tools. Stud becoming a mem	n with white board,Power lents who will enroll this co	ourse in the summer will be announced by	scho the f	faculty	1 semester a member.	are required to follow	_
methods	In online platform online tools. Stud becoming a mem Date	n with white board,Power lents who will enroll this conber of the system, which white board, which which white which whi	ourse in the summer will be announced by nary Concepts,Revie	scho the f	faculty	1 semester a member.	are required to follow	_
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week 1	In online platform online tools. Stud becoming a mem Date 3.08.2021 4.08-2021	n with white board,Power lents who will enroll this content of the system, which with the length of the system and Prelimit Heat Transfer Mechanism	ourse in the summer will be announced by nary Concepts,Revie ms	scho the f	faculty	1 semester a member.	are required to follow	_
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WEEK Week 1 Week 1 Week 2 Week 2	In online platform online tools. Stud becoming a mem Date 3.08.2021 4.08-2021 10.08.2021 11.08.2021	Introduction and Prelimit Heat Transfer Mechanist Steady State 3-D Conduction	nary Concepts, Reviews ction n in Fins	scho the f	faculty	1 semester a member.	are required to follow	_
WEEK Week 1 Week 1 Week 2 Week 2 Week 3	In online platform online tools. Stud becoming a mem Date 3.08.2021 4.08-2021 10.08.2021 11.08.2021	Introduction and Prelimit Heat Transfer Mechanist Steady State 1-D Conduction Steady State Conduction	ourse in the summer will be announced by nary Concepts, Revieus strong ction ction in Fins in Fins	scho the f	TOP IC	1 semester a member.	are required to follow	_
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WEEK Week 1 Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 4	In online platform online tools. Stud becoming a mem Date 3.08.2021 4.08-2021 10.08.2021 17.08.2021 18.08.2021 24.08.2021 25.08.2021	Introduction and Prelimit Heat Transfer Mechanist Steady State 1-D Conduction Steady State Conduction Steady State Conduction Transient Heat Conduction Midterm Exam I	nary Concepts, Revie	scho the f	TOP IC	1 semester a member.	are required to follow	_
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Mehmed $\textbf{Rafet Q\"zdemir}_{\sharp:i} \overset{\textit{FacUty},}{\models \text{-tm-tozd-mr@m"m""d""}}$

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Miderm Exams

Digitally SIgltd by Mehmed R<tet bzdemir :cn=MehmedRafetCzderrir , o=Marmara Uriver sity, ou=Engineering FacUty,

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Week 446

Week 15

Mechanical Engineering

					l				
					kly Cou	rse			Weekly Time&
Course Code		Course Name	Course Type	Т	Hours A	L	Credits	ECTS	Classroom Schedule
MATH 2055	Diffe	erential Equations	Compulsory	3	0	0	3	4	Tuesday 18:00 - 20:50
Prerequisite			Prereq	uisite	to				Thursday 12:00 - 14:50
Course Lecturer	Asst. Prof. Dr. Abo	lussamet SUBAŞI (İTÜ)							
Teaching Assistant(s)						Office	Hours		
E-mail	subasiab@itu.edu.t	<u>r</u>				ciicuc			
Phone					C	Office ,	/ Room No		
Course Objectives	o To teach metho	e basic concepts required to unde ds to solve differential equations o y to apply knowledge of mathema	of various typ	oes.				differential equations	5.
	Cengel, Y. A., & Pa	alm, W. J. (2013). Differential Equa	ations for Eng	ginee	rs an	d Scie	entists. Ne	ew York: McGraw-Hill	Education.
Tandhaala		vard B. Saff, Arthur David Snider.							
Textbooks and/or References	Zill, D. G. (2001). A Learning.	A first course in differential equati	ons with mo	delin	g app	licati	ons. Pacifi	ic Grove, CA: Brooks/0	Cole Thomson
	Kreyszig, E. (2006)	. Advanced Engineering Mathema	atics. John W	iley 8	& Son	s, Inc	. New Yor	k, 9th Edition.	
	Xie, W. (2010). Dit	fferential equations for engineers.	New York: C	amb	ridge	Univ	ersity Pre	SS.	
Teaching	•	rith white board and Lecture Note	s. Learning o	utcoi	mes v	vill be	e followed	l in the course using o	nline tools.
methods		enroll in the summer school (202 n will be announced by the faculty	1 semester) a					_	
•			1 semester) a	are re		ed to		_	
methods	this system, which		1 semester) a member.	are re	equire	ed to		_	
wethods	this system, which	will be announced by the faculty	1 semester) a member.	are re	equire	ed to		_	
week 1	Date 8/3/2021	will be announced by the faculty	1 semester) a member.	are re	equire	ed to		_	
WEEK Week 1 Week 1	Date 8/3/2021 8/5/2021	Introduction to Differential Equation	1 semester) a member.	are re	equire	ed to		_	
WEEK Week 1 Week 1 Week 2	Date 8/3/2021 8/5/2021 8/10/2021	Introduction to Differential Equation First Order Differential Equation	1 semester) a member. stions s s s	are re	equire	ed to		_	
WEEK Week 1 Week 1 Week 2 Week 2	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equation	1 semester) a member. stions s s s	are re	equire	ed to		_	
WEEK Week 1 Week 1 Week 2 Week 2 Week 3	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equat Second Order Differential Equat	1 semester) a member. stions s s soions	are re	equire	ed to		_	
week 1 Week 1 Week 2 Week 2 Week 3 Week 3	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021 8/19/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equat Second Order Differential Equat Engineering Applications	1 semester) a member. stions s s soions	are re	equire	ed to		_	
week 1 Week 1 Week 2 Week 2 Week 3 Week 3 Week 4	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021 8/19/2021 8/24/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equat Second Order Differential Equat Engineering Applications Higher Order Differential Equat	1 semester) a member. stions s s s sions sions	are re	equire	ed to		_	
week 1 Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 4	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021 8/19/2021 8/24/2021 8/26/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equat Second Order Differential Equat Engineering Applications Higher Order Differential Equation	1 semester) a member. stions s s s sions sions	are re	equire	ed to		_	
week 1 Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 4 Week 5	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021 8/19/2021 8/24/2021 8/26/2021 8/31/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equat Second Order Differential Equat Engineering Applications Higher Order Differential Equation Midterm Exam I Higher Order Differential Equation	1 semester) a member. stions s s s sions sions	are re	equire	ed to		_	
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wethods WEEK Week 1 Week 1 Week 2 Week 2 Week 3 Week 3 Week 4 Week 5 Week 5 Week 6 Week 6 Week 7 Week 8	this system, which Date 8/3/2021 8/5/2021 8/10/2021 8/12/2021 8/17/2021 8/19/2021 8/24/2021 8/26/2021 8/31/2021 9/2/2021 9/7/2021 9/9/2021 9/14/2021 9/16/2021 9/21/2021	Introduction to Differential Equation First Order Differential Equation First Order Differential Equation Second Order Differential Equation Second Order Differential Equat Engineering Applications Higher Order Differential Equati Midterm Exam I Higher Order Differential Equati The Laplace Transform The Laplace Transform Systems of Differential Equation Systems of Differential Equation Engineering Applications	1 semester) a member. Intions s s s ions ions ons s s	are re	OPI	ed to	follow the	_	a member of Weight in Semester
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Mechanical Engineering

Course Code		Course Name	Course Type		kly Co Hours		Credits	ECTS	Weekly Time& Classroom	
ME 1053		Statics	Commulación	T	A	L 0	6		Schedule Monday 12:00-	
ME 1052		Statics	Compulsory	О	U	U		6 ynamics & ME 2072	15:00 & Wednesday	
Prerequisite	N/A		Prereq	uisite	e to		Strength of	•	16:00-19:00	
Course Lecturer	Prof.Dr. Aykut KEN	NTLİ								
Teaching Assistant(s)	N/A					-	e Hours dule	N/A		
E-mail	akentli@marmara.e	<u>du.tr</u>				Julie	uuic			
Phone	N/A					Offic	e / Room No	N/A		
Course Objectives	To provide studen	its with a clear and thorough pres	sentation of t	he tl	heor	y and	d applicatio	ons of engineering mech	nanics.	
	Statics , R. C. Hibb	eler, Pearson.								
Textbooks and/or										
References										
Teaching methods	using online tools.	(Pearson) with white board, Pow . Students who will enroll this cou ember of the system, which will b	urse in the su	mme	er scl	hool	2021 seme	ester are required to fol		
WEEK	Date				TOI	PICS	5			
Week 1	8/2/2021	General Principle, Force Vectors	;							
Week 1	8/4/2021	Force Vectors (cont'd)								
Week 2	8/9/2021	Equilibrium of a Particle								
Week 2	8/11/2021	Force System Resultants								
Week 3	8/16/2021	Equilibrium of a Rigid Body								
Week 3	8/18/2021	Structural systems								
Week 4	8/23/2021	Structural systems (cont'd)								
Week 4	8/25/2021	Midterm Exam								
Week 5	8/30/2021	Internal Forces								
Week 5	9/1/2021	Friction								
Week 6	9/6/2021	Friction (cont'd)								
Week 6	9/8/2021	Center of Gravity and Centroid								
Week 7	9/13/2021	Moments of Inertia								
Week 7	9/15/2021	Moments of Inertia (cont'd)								
Week 8	9/20/2021	Final Exam								
Estal	uation sil	Evaluation Tool Midterm Exams Pop-up Quizzes Final Exam	Quantity			Dat	te	Weight in Total (%)	Weight in Semester Evaluation (%)	
T	SOIS ERSITES!	Midterm Exams	TBD			ТВ	D	60	60	
	UNIVE KULL III	Dan un Ouisses				-				
, DA	O' FALL UMO	Pop-up Quizzes	-			-		0	0	



Mechanical Engineering

Course Code		Course Name	Course Type		Hour	rrs Credits ECTS Classro			Weekly Time& Classroom	
145.264	TL			T	A			_	Schedule Monday 09:00-12	
ME 264		ermodynamics II	Compulsory	3	0	0	3	5	00 & Tuesday:	
Prerequisite	ME 2064		Prereq	uisite	e to	1	ME 4083	T	09.00-12:00	
Course Lecturer	Asst. Prof. Dr. Me	hmed Rafet Özdemir								
Teaching Assistant(s)	N/A						e Hours dule	N/A		
E-mail	mehmet.ozdemir@	marmara.edu.tr				-				
Phone	N/A					Offic	e / Room No	N/A		
Course Objectives	-	ourse is that students gain the kn on and air conditioning systems	owledge and	l abil	ity t	о арр	oly 1st and	2nd laws of thermodyn	amics to	
	Thermodynamics	– An Engineering Approach, Yunu	ıs Cengel and	Mic	hae	l Bole	es, 8th edit	ion, 2014, McGraw Hill.		
Textbooks and/or	Thermodynamics	– An Interactive Approach, Subra	ta Bhattachar	jee,	201	6, Pe	arson			
References	Principles of Engir 8th edition, 2015,	neering Thermodynamics, Michae , Wiley.	l J. Moran, H	owa	rd N	. Sha	piro, Daisie	e D. Boettner and Marga	aret B. Bailey,	
Teaching methods	online tools. Stud	n with white board, Power Point P ents who will enroll this course in ber of the system, which will be a	the summer	sch	ool 2	2021	semester a		-	
WEEK	Date				то	PICS	5			
Week 1	8/2/2021	Review of Second Law Analysis								
Week 1	8/3/2021	Introduction to power cycles; st	andard air as	sum	ptio	n; Ca	rnot cycle			
Week 2	8/9/2021	Gas Power Cycles								
Week 2	8/10/2021	Gas Power Cycles								
Week 3	8/16/2021	Vapor and Combined Power Cyc	cles							
Week 3	8/17/2021	Vapor and Combined Power Cyc	cles							
Week 4	8/23/2021	Vapor and Combined Power Cyc	cles							
Week 4	8/24/2021	Midterm Exam I								
Week 5	8/30/2021	Refrigeration Cycles								
Week 5	8/31/2021	Refrigeration Cycles								
Week 6	9/6/2021	Gas Mixtures								
Week 6	9/7/2021	Midterm Exam II								
Week 7	9/13/2021	Gas-Vapor Mixtures and Air-Co	nditioning							
Week 7	9/14/2021	Gas-Vapor Mixtures and Air-Co	nditioning							
Week 8	9/20/2021	Final Exam								
Eval	Watton STESI OF FAKULTES ON FA	Evaluation Tool	Quantity			Dat		Weight in Total (%)	Weight in Semester Evaluation (%)	
T	OOL VERS LIES	Midterm Exams	2				4,6	50 50		
OMARA	LIK FAROLUMO	Pop-up Quizzes or HWs	4			Pop	<u>'</u>	10 10		
MAKKNOIS	MUH	Final Exam	1		٧	Veel	C 15	40	40	



Mechanical Engineering

Course Code		Course Name	Course Type		kly Co		Credits	ECTS	Weekly Time& Classroom	
			.,,,,,	Т	Α	L			Schedule	
ME 2075	Statics &	Strength of Materials	Compulsory	6	0	0	4	4	Monday 18:00- 21:00 &	
Prerequisite	N/A		Prereq	uisite	e to				Wednesday 10:00 13:00	
Course Lecturer	Prof.Dr. Aykut KEN	NTLİ								
Teaching Assistant(s)	N/A					Offic Sche	e Hours	N/A		
E-mail	akentli@marmara.e	<u>du.tr</u>				Scne	auie			
Phone	N/A					Offic	e / Room No	N/A		
Course Objectives	The main aim of the engineering point	nis course is to provide students t of view.	he general c	once	pts o	of sta	atics and st	rength of materials with	n an	
	Russell C. Hibbeler	r, Statics and Mechanics of Mater	ials, Pearson							
Textbooks and/or References										
Teaching methods	using online tools.	(Pearson) with white board, Pow Students who will enroll this cou ember of the system, which will b	irse in the su	mme	er sch	nool	2021 seme	ester are required to fol		
WEEK	Date				TOP	PICS	;			
Week 1	8/2/2021	Introduction								
Week 1	8/4/2021	Vector representation of forces								
Week 2	8/9/2021	Concept of moment								
Week 2	8/11/2021	Equilibrium of a rigid body								
Week 3	8/16/2021	Method of joints								
Week 3	8/18/2021	Forces acting on a rigid body								
Week 4	8/23/2021	Center of gravity								
Week 4	8/25/2021	Moments of areas								
Week 5	8/30/2021	Forces in beams								
Week 5	9/1/2021	Shear and bending moment diag	grams							
Week 6	9/6/2021	Stress components in Cartesian	coordinates							
Week 6	9/8/2021	Mechanical Properties of Mater	ials							
Week 7	9/13/2021	Pure bending of beams								
Week 7	9/15/2021	Transverse shear and the shear	formula							
Week 8	9/20/2021	Final Exam								
Eval	wation ools ERSITESI ON FAKULTESI OLIK FAKULMU MUH. BÖLÜMÜ	Evaluation Tool Midterm Exams Pop-up Quizzes Final Exam	Quantity			Dat	e	Weight in Total (%)	Weight in Semester Evaluation (%)	
T	SOIN ERSITES!	Midterm Exams	TBD			ТВІ	D	60 60		
ARA	UN FAKULUMU	Pop-up Quizzes	-			-		0 0		
1 ARMAIDIS	LIN BOL	Final Exam	1			ТВІ	D	40	40	



SYLLABUS

Mechanical Engineering

2020-2021 Summer School

		2020-2023	1 Summer S	cho	ol			
Course Code		Course Name	Course Type		kly Course Hours	Credits	ECTS	Weekly Time& Classroom Schedule
ME 2003		Dynamics	Compulsory		0 0		6	Wednesday 09:00-12:50
Prerequisite	ME 1052 Statics		Prereq	uisite	to		1	Friday 13.00-16:50
Course Lecturer	Asst. Prof. Dr. İbra	ahim Sina Kuseyri						
Teaching Assistant(s)	N/A					fice Hours nedule	N/A	
E-mail	sina.kuseyri@marm	ara.edu.tr			30	ieuuie		
Phone	N/A				Of	fice / Room No	N/A	
Course Objectives	The aim of the co	urse is to teach the fundamentals	of kinematio	s an	d kineti	cs of particle	es and rigid bodies.	
Textbooks	Dynamics, R. C. Hi	bbeler, Pearson.						
and/or References								
Teaching methods	online Pearson M	with white board, Power Point P yLab tools. Students who will enro olling to the system with an addit	oll this cours	e in t	he sum	mer school	2021 semester are requ	-
WEEK	Date				TOPIC	CS		
Week 1	8/3/2021	Introduction and Preliminary Co	ncepts					
Week 1	8/4/2021	Kinematics of Particles						
Week 2	8/10/2021	Kinematics of Particles						
Week 2	8/11/2021	Kinematics of Rigid Bodies						
Week 3	8/17/2021	Kinematics of Rigid Bodies						
Week 3	8/18/2021	Kinetics of Particles						
Week 4	8/24/2021	Kinetics of Particles						
Week 4	8/25/2021	Midterm Exam						
Week 5	8/31/2021	Kinetics of Rigid Bodies						
Week 5	9/1/2021	Kinetics of Rigid Bodies						
Week 6	9/7/2021	Work and Energy Methods						
Week 6	9/8/2021	Work and Energy Methods						
Week 7	9/14/2021	Impulse-Momentum Methods						
Week 7	9/15/2021	Impulse-Momentum Methods						
Week 8	9/21/2021	Final Exam						
Eval	wattoncsl	Evaluation Tool Midterm Exam Homework Final Exam	Quantity		D	ate	Weight in Total (%)	Weight in Semester Evaluation (9
1	ON TES	Midterm Exam	1		We	ek 4	30	50
ARA	UN FAKULUMU	Homework	5		Cont	nuous	30	50
MARMOIS	MUH. BU	Final Exam	1		We	ek 8	40	

Mehmed Rafet Özdemir

SYLLABUS

Mechanical Engineering

		2020-2021	L Summer S	CHO	UI			
Course Code		Course Name	Course Type		kly Course Hours	Credits	ECTS	Weekly Time& Classroom
				Т	A L		-3.0	Schedule
ME 3018	Mec	hanical Vibrations	Elective	6	0 0	5	5	Tuesday 09:00-11:50
Prerequisite	ME 2003 Dynamics		Prerequ	uisite	e to			Thursday 09.00-11:50
Course Lecturer	Asst. Prof. Dr. İbra	him Sina Kuseyri						
Teaching Assistant(s)	N/A					ice Hours	N/A	
E-mail	sina.kuseyri@marm	ara.edu.tr			Scr	edule		
Phone	N/A				Off	ice / Room No	N/A	
Course Objectives	The aim of the cou	urse is to teach the fundamentals	mechanical	vibra	ations.			
Textbooks	Text: Mechanical	Vibrations, S.S. Rao, Pearson.						
and/or References	Reference: Engine	ering Vibrations, D. Inman, Wiley						
Teaching methods	In online platform	with white board, Power Point P	resentations					
WEEK	Date				TOPIC	S		
Week 1	8/3/2021	Introduction and Preliminary Co	ncepts					
Week 1	8/4/2021	Lumped Modeling of Elastic Med	chanical Syst	ems				
Week 2	8/10/2021	Free Respnse of First Order Syst	ems					
Week 2	8/11/2021	Free Response of First Order Sys	stems					
Week 3	8/17/2021	Forced Harmonic Response of F	irst Order Sy	sten	าร			
Week 3	8/18/2021	Forced Harmonic Response of F	irst Order Sy	sten	าร			
Week 4	8/24/2021	General Forced Response of Firs	t Order Syste	ems				
Week 4	8/25/2021	Midterm Exam						
Week 5	8/31/2021	Vibration of Second Order Syste	ms					
Week 5	9/1/2021	Vibration of Second Order Syste	ms					
Week 6	9/7/2021	Introduction to Rotor Dynamics						
Week 6	9/8/2021	Vibration Isolation and Vibration	n Absorbers					
Week 7	9/14/2021	Vibration of MDOF Systems						
Week 7	9/15/2021	Vibration of MDOF Systems						
Week 8	9/21/2021	Final Exam						
Eval	uation TES	Evaluation Tool Midterm Exam Project Final Exam	Quantity			ate	Weight in Total (%)	Weight in Semester Evaluation (%)
To	SOINERS! TES	Midterm Exam	1			ek 4	30 50	
NRA	UN FAKULUMU	Project	1		We	ek 6	30 50	
MARMOIS	MUH. BU	Final Exam	1		We	ek 8	40	



$\label{eq:marmara} \textbf{MARMARA UNIVERSITY - Faculty of Engineering}$

SYLLABUS

Mechanical Engineering

2020-2021 Summer School

Course Code		Course Name	Course Type		kly Co Hours		Credits	ECTS	Weekly Time& Classroom
ME 3021	System	Dynamics and Control	Compulsory	T	A	0	5	5	Schedule Thursday 13:00-15:50
Prerequisite	Math 2055 Differer		Prereg	uisite	to.		MF 4022 Cd	ntrol Systems	Friday
Course Lecturer		ahim Sina Kuseyri	Trereq	413166	- 10		1012 4022 CC	Jitti of Systems	09.00-11:50
Teaching		anni Sina Raseyii							
Assistant(s)	N/A						e Hours dule	N/A	
E-mail	sina.kuseyri@marn	nara.edu.tr				Scrie	uule		
Phone	N/A					Offic	e / Room No	N/A	
Course Objectives	The aim of the co	urse is to teach the fundamentals	modeling an	d an	alysi	s of	dynamic sy	stems, and feedback co	ntrol.
Textbooks	Text: Dynamic Sy	tems: Modeling, Simulation and C	Control, C.A. k	luev	er, V	Viley	' .		
and/or References	Reference 1: Syst	em Dynamics, Ogata, Pearson							
	Reference 2: Con	trol Systems, Nise, Wiley							
Teaching methods	In online platforn	n with white board, Power Point P	resentations	•					
WEEK	Date				ΤΟΙ	PICS	3		
Week 1	8/3/2021	Introduction and Preliminary Co	ncepts						
Week 1	8/4/2021	Modeling Mechanical Systems							
Week 2	8/10/2021	Modeling Electrical and Electron	mechanical Sy	/ster	ns				
Week 2	8/11/2021	Modeling Fluid and Thermal Sys	stems						
Week 3	8/17/2021	Standard System Representatio	ns						
Week 3	8/18/2021	Standard System Representatio	ns						
Week 4	8/24/2021	Numerical Simulation of Dynam	ic Systems						
Week 4	8/25/2021	Midterm Exam							
Week 5	8/31/2021	Review of Complex Numbers an	ıd Laplace Tra	nsfo	rm				
Week 5	9/1/2021	Transient Response							
Week 6	9/7/2021	Transient Response							
Week 6	9/8/2021	Frequency Response							
Week 7	9/14/2021	Feedback Control							
Week 7	9/15/2021	Feedback Control							
Week 8	9/21/2021	Final Exam							
Fval	COLK FAKULTES	Evaluation Tool	Quantity			Dat	:e	Weight in Total (%)	Weight in Semester Evaluation (
7	dols FRSITES	Midterm Exam	1			Nee	k 4	30	50
	UNIVERKULIM	Midterm Exam Project Final Exam	1		\	Nee	k 7	30	50
ARMAN	LIN BOLD	Final Exam	1		١	Nee	k 8	40	

Mehmed Rafet Özdemir Digitally signed by Mehmed Rafet Özdemir DN: cn=Mehmed Rafet Özdemir, o=Marmara University, ou=Engineering Faculty, email=mehmet-zodemiremarmara.edu.tr, c=TR Date: 2021.06.21 10.56.37 +03'00'

SYLLABUS

Mechanical Engineering

2020-2021 Summer School

			2020-202	1 Summer S	cno	OI .				
Course Code		Course Na	me	Course Type		kly Cou Hours		Credits	ECTS	Weekly Times Classroom
					Т	Α	L			Schedule
ME2063	T	hermodyna	imics I	Compulsory	3	0	0	5	5	Thursday 09:0 12-00 & Friday
Prerequisite	N/A			Prereq	uisite	to	М	IE 2064		09.00-12:00
Course Lecturer	Asst. Prof. Dr. M	ehmed Rafe	t ÖZDEMİR							
Teaching Assistant(s)	N/A					- 17	Office H		N/A	
E-mail	mehmet.ozdemir@	@marmara.ed	u.tr				chedul	le	*	
Phone	N/A					c	Office /	Room No	N/A	
Course Objectives	classical point of	view. This c		tion for subse	eque	nt the	rmod	dynamics	ing thermodynamics fr , fluid mechanics and h	
	Thermodynamics	s – An Engine	eering Approach, Yuni	us Cengel and	Mic	hael B	Boles,	8th edit	ion, 2014, McGraw Hill	
Textbooks and/or References	Thermodynamics	s – An Intera	ctive Approach, Subra	ta Bhattachar	jee,	2016,	Pears	son		
References	Principles of Eng 8th edition, 2015		rmodynamics, Michae	el J. Moran, H	owa	rd N. S	Shapir	ro, Daisie	e D. Boettner and Marg	aret B. Bailey
Teaching methods	online tools. Stud	dents who w		n the summer	scho	ool 20	21 se	emester a	outcomes will be follo are required to follow t	
WEEK	Date		*		•	ТОРІ	CS			
Week 1	5.08.2021	Introducti	on and Preliminary Co	oncepts						
Week 1	6.08.2021	Energy, En	negy Transfer and Gen	neral Energy A	naly	sis				
Week 2	12.08.2021	Properties	of Pure Substances							
Week 2	13.08.2021	Properties	of Pure Substances							
Week 3	19.08.2021	Energy An	alysis in Closed Syster	ms						
Week 3	20.08.2021	Mass and	Energy analysis in Cor	ntrol Volumes						
Week 4	26.08.2021	Mass and	Energy analysis in Cor	ntrol Volumes						
Week 4	27.08.2021	Midterm E	Exam I							
Week 5	2.09.2021	2nd Law o	f Thermodynamics							
Week 5	3.09.2021	2nd Law o	f Thermodynamics							
Week 6	9.09.2021	Carnot Cyc	cle and Refrigeration (Cycle						
Week 6	10.09.2021	Midterm E	xam II							-
Week 7	16.09.2021	Entropy Co	oncept							
Week 7	17.09.2021	Entropy								
Week 8	21.09.2021	Final Exam	1							
EVal	ration	Evaluatio	n Tool	Quantity		С	Date		Weight in Total (%)	Weight in Semester Evaluation (9
1	Tation TOUS. WINVERSITES WIN FAKULTE	Midterm	Exams	2		We	ek 4,	6	45	45
.ARA	UNIVERKULTE	Pap-up Q	uizzes	5		Po	p up		15	15
1 0000	of 11 Of O.	12 8	The state of the s			25,57,35				

Week 15

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