

**ÇANKAYA ÜNİVERSİTESİ**  
**MAKİNE MÜHENDİSLİĞİ ANABİLİM DALI**  
**YÜKSEK LİSANS VE DOKTORA DERSLERİ**

**MASTER OF SCIENCE COURSES / YÜKSEK LİSANS DERSLERİ**

**COMPULSORY COURSES / ZORUNLU DERSLER** **T U K AKTS**

ME 501	Analytical Methods in Mechanical Engineering I	3 0 3	7,5
ME 502	Advanced Numerical Methods for Engineers	3 0 3	7,5
ME 590	Seminar (Thesis Option)	0 0 0	7,5
ME 592	Project (Non-Thesis Option)	0 0 0	15
ME 599	M.S. Thesis	0 0 0	60
RME 500	Research Methods and Ethics	0 0 0	7,5

**ELECTIVE COURSES / SEÇMELİ DERSLER** <sup>1,2</sup>

**Mechanics Area / Mekanik Alanı**

ME 504	Mechanical Engineering Measurements	3 0 3	7,5
ME 525	Theory of Elasticity	3 0 3	7,5
ME 526	Advanced Strength of Materials	3 0 3	7,5
ME 530	Dynamics of Machinery	3 0 3	7,5
ME 533	Kinematic Synthesis	3 0 3	7,5
ME 536	Advanced Robotics	3 0 3	7,5
ME 538	Composite Materials	3 0 3	7,5
ME 540	Thermal Stresses	3 0 3	7,5
ME 542	Fracture Mechanics	3 0 3	7,5
ME 550	Advanced Machine Vibrations	3 0 3	7,5
ME 574	Bearing and Lubrication	3 0 3	7,5

**Thermal Science Area / Isı-Enerji Alanı**

ME 504	Mechanical Engineering Measurements	3 0 3	7,5
ME 506	Advanced Heat Transfer and Applications	3 0 3	7,5
ME 510	Conduction Heat Transfer	3 0 3	7,5
ME 512	Convection Heat Transfer	3 0 3	7,5
ME 514	Radiative Heat Transfer	3 0 3	7,5
ME 516	Advanced Fluid Mechanics	3 0 3	7,5
ME 520	Gas Dynamics	3 0 3	7,5
ME 544	Pressure Vessel Design	3 0 3	7,5
ME 558	Macromolecular Hydrodynamics	3 0 3	7,5
ME 560	Wind Power	3 0 3	7,5
ME 570	Microscale Fluid Mechanics	3 0 3	7,5
ME 576	Air Pollution and Control Technologies	3 0 3	7,5
ME 578	Refrigeration and Air Conditioning	3 0 3	7,5
ME 580	Energy Conversion Principles	3 0 3	7,5

<sup>1</sup>: Öğrenciler isterlerse ME6XX kodlu ders alabilirler.

<sup>2</sup>: Öğrenciler, danışmanın uygun görmesi halinde Çankaya Üniversitesi Lisansüstü Eğitim Öğretim Yönetmeliği'nde belirtilen sayı kadar ME4XX kodlu ders alabilirler.

## Ph.D. COURSES / DOKTORA DERSLERİ

COMPULSORY COURSES / ZORUNLU DERSLER		T U K	AKTS
ME 501	Analytical Methods in Mechanical Engineering I <sup>3</sup>	3 0 3	7,5
ME 502	Advanced Numerical Methods for Engineers <sup>3</sup>	3 0 3	7,5
ME 690	Seminar	0 0 0	7,5
ME 696	Yeterlilik Çalışması ve Sınav	0 0 0	30
ME 699	Ph.D. Thesis	0 0 0	150
RME 500	Research Methods and Ethics	0 0 0	7,5

## ELECTIVE COURSES / SEÇMELİ DERSLER<sup>4</sup>

### Mechanics Area / Mekanik Alanı

ME 603	Analytical Methods in Mechanical Engineering II	3 0 3	7,5
ME 624	Spatial and Analytical Dynamics	3 0 3	7,5
ME 625	Mathematical Theory of Elasticity	3 0 3	7,5
ME 626	Advanced Mechanics of Materials	3 0 3	7,5
ME 628	Continuum Mechanics	3 0 3	7,5
ME 629	Flexible Multibody Dynamics	3 0 3	7,5
ME 630	Vehicle Dynamics	3 0 3	7,5
ME 632	Plasticity and Metal Forming	3 0 3	7,5
ME 633	Synthesis of Mechanisms	3 0 3	7,5
ME 636	Advanced Topics in Robotics	3 0 3	7,5
ME 638	Mechanics of Composite Materials and Structures	3 0 3	7,5
ME 643	Applied Fracture Mechanics	3 0 3	7,5
ME 646	Modeling and Control of Flexible Manufacturing Systems	3 0 3	7,5
ME 648	Nontraditional Machining Processes	3 0 3	7,5
ME 651	Advanced Vibrations	3 0 3	7,5
ME 656	Tribology	3 0 3	7,5
ME 664	Finite Element Method	3 0 3	7,5
ME 666	Fluid Power Control	3 0 3	7,5

### Thermal Science Area / Isı - Enerji Alanı

ME 603	Analytical Methods in Mechanical Engineering II	3 0 3	7,5
ME 608	Advanced Thermodynamics	3 0 3	7,5
ME 611	Advanced Conduction Heat Transfer	3 0 3	7,5
ME 613	Advanced Convection Heat Transfer	3 0 3	7,5
ME 615	Advanced Radiative Heat Transfer	3 0 3	7,5
ME 616	Viscous Flow	3 0 3	7,5
ME 618	Compressible Flow	3 0 3	7,5
ME 622	Principles of Turbulence	3 0 3	7,5
ME 652	Advanced Combustion	3 0 3	7,5
ME 654	Computational Fluid Dynamics	3 0 3	7,5
ME 656	Tribology	3 0 3	7,5
ME 662	Fuel Cell Systems	3 0 3	7,5
ME 668	Internal Combustion Engines	3 0 3	7,5
ME 670	Advanced Microfluidics and Applications	3 0 3	7,5
ME 672	Biomedical Heat and Mass Transfer	3 0 3	7,5

<sup>3</sup>: Yüksek lisans programında bu veya eşdeğeri dersleri almış olan öğrenciler bunların yerine seçmeli ders alırlar.

<sup>4</sup>: Öğrenciler, danışmanın uygun görmesi halinde Çankaya Üniversitesi Lisansüstü Eğitim Öğretim Yönetmeliğinde belirtilen sayı kadar ME5XX kodlu ders alabilirler.