

**İZMİR INSTITUTE OF TECHNOLOGY**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**ME473 DYNAMICS OF MACHINERY**  
**FALL 2019-2020**

**COURSE INSTRUCTOR**

Assoc. Prof. Dr. Gökhan Kiper (Room: Z14, gokhankiper@iyte.edu.tr, 750 6777)

**COURSE ASSISTANTS**

Mr. Cevahir Karagöz (Room: Z31 – Mechatronics Laboratory, cevahirkaragoz@iyte.edu.tr, 750 6752)

**COURSE SCHEDULE**

Tuesday 10:45 – 11:30 / Thursday 08:45 – 10:30 @ room D5

**COURSE WEB SITE**

İYTE Course Management System: <https://cms.iyte.edu.tr> ⇒ ME473

**STRONGLY RECOMMENDED PREREQUISITES**

ME331 Theory of Machines I, ME332 Theory of Machines II, ME 343 Numerical Methods in Engineering

**COURSE CONTENT**

Force analysis in machinery, virtual work principle, dynamic motion analysis of planar mechanisms, cam dynamics, balancing

**TEXT BOOK**

E. Söylemez, Makina Teorisi 2: Makina Dinamiği, Birsen Yayınevi, 3<sup>rd</sup> Edition, 2017.

**REFERENCES**

E. Söylemez, Force Analysis of Mechanisms, <http://ocw.metu.edu.tr/mod/resource/view.php?id=3386>, 2011.

R. L. Norton, Design of Machinery: An Introduction to the Synthesis and Analysis of Mechanisms and Machines, McGraw-Hill, 5<sup>th</sup> Edition, 2011

B. Paul, Kinematics and Dynamics of Planar Machinery, Prentice Hall, 1979

H. Dresig, F. Holzweissig, Dynamics of Machinery, Springer, 2010

B. Dizioğlu, Mekanizma Tekniği – Cilt 3: Dinamik, Tercüme: F. Pasin, M. Gürgöze, İTÜ Mühendislik-Mimarlık Fakültesi, No:110, 1976

F. Pasin, Makina Dinamiği, 2<sup>nd</sup> Ed., Seç Kitap, 1989

Ö. Turhan, Makina Teorisi – Mekanizmalar ve Makina Dinamiği, Nobel Yayınevi, 2012

F. M. Botsalı, Teori ve Problemlerle Makina Dinamiği, 2<sup>nd</sup> Ed., Nobel Yayınevi, 2010

İ. D. Akçalı, Makina Dinamiği, 5<sup>th</sup> Ed., Karahan Kitabevi, 2012

E. Dokumacı, Makina Dinamiği, Nobel Yayınevi, 2012

Many other books available in IzTech Library (search “dynamics of machinery”, “design of machinery”)

**ASSIGNMENTS & COMPUTER SESSIONS**

Tentatively there will be weekly/biweekly homeworks. Excel and Matlab will be used for computations.

**EXAMINATIONS**

Examination dates, hours and rooms will be announced at the web page of the course. Make-up examinations are offered only for the students who have a valid excuse approved by the department.

**TENTATIVE GRADING**

Assignments %40 + Midterm Examination %30 + Final Examination %30

**ACADEMIC ETHICS**

All written submissions (homeworks, exams, etc.) must reflect purely independent and individual efforts. All reference material (books, scientific papers, web sites, etc.) in these submissions should be properly cited. Academic dishonesty, including any form of cheating will not be tolerated and may result in failure of the course and/or formal disciplinary proceedings that may lead to suspension or dismissal. Cheating includes but is not limited to such acts as offering or receiving unpermitted assistance in the exams, using any type of unauthorized written material during the exams, handing in any part or all of someone else’s work as your own, copying from an internet source. Plagiarism (using someone else’s work without giving credit) is a specific form of cheating and it is a form of literary theft.