



“SUMMER COURSE ON EXERGY AND ITS APPLICATIONS”
(22-24 August 2022)
Bursa Uludağ University, Bursa



Day 1: 22 August 2022 (Monday) Faculty of Engineering, B. Uludağ University, Türkiye		
Hours	Lecturers	Title
08.00-09.00		Registration
09.00-09.15	Dr.A.S.Kılavuz (Rector)	Welcoming Talks
09.15-10.00	Dr. I. Dincer	Energy and Exergy Dimensions
10.00-10.45	Dr. M. Özilgen	Introduction to Bio & Medical Thermodynamics
10.45-11.00		Break (Q&A)
11.00-11.45	Dr. Y.A. Cengel	Thermodynamic Concepts
11.45-12.30	Dr. Y.A. Cengel	Introduction to the 2 nd Law and Exergy
12.30-13.30		Lunch Break
13.30-14.15	Dr. A. Hepbasli	Exergetic Efficiencies and Indicators for Energy Systems
14.15-15.00	Dr. A. Midilli	Chemical Exergy Calculations: Examples
15.00-15.15		Break (Q & A)
15.15-16.00	Dr. I. Dincer	Energy and Exergy Analyses and Efficiency Assessments of Systems: A Problem Session-1
16.00-16.45	Dr. I. Dincer	Energy and Exergy Analyses and Efficiency Assessments of Systems: A Problem Session-2
16.45-17.00		Break (Q & A)
PANEL 1 17.00-18.30 Moderator: Dr. A. Midilli	Dr. I. Dincer Dr. Y. A. Cengel Dr. A. Hepbasli Dr. M. Özilgen	KONU: Research Directions in Energy and Exergy YER: Faculty of Engineering

Day 2: 23 August 2022 (Tuesday) Bursa Chamber of Commerce and Industry, Türkiye		
Hours	Lecturers	Title
09.00-09.40	Dr. Y.A. Cengel	Exergy of the cold (with LNG example)
09.40-10.20	Dr. Y.A. Cengel	Entropy and Information
10.20-10.30		Break (Q & A)
PANEL 2 10.30-12.15 Moderator: Dr. A. Midilli	Dr. I. Dincer Dr. Y. Cengel Dr. A.B. Etemoğlu Dr. A. Hepbasli İ. Burcak (BTSO)	KONU: Sanayide Yeni Enerji Açılımları YER: Bursa Ticaret ve Sanayi Odası
12.15-13.15		Lunch Break
13.15-14.00	Dr. I. Dincer	Integrated Solutions with Exergy
14.00-14.45	Dr. A. Hepbaşlı	Exergy-based Analyses and Assessments of Buildings
14.45-15.30	Dr. M. Özilgen	Exergy Analysis of Biological Structures
15.30-15.45		Break (Q & A)
15.45-16.30	Dr. A. Midilli	Exergy Analysis of Gasification Systems
16.30-17.15	Dr. A. Midilli	Exergy and Sustainability Assessments of Hydrogen Energy Systems
17.15-18.00	Dr. A. Hepbasli	Energy and Exergy Management System Standards
18.00 End of the Day		

Day 3: 24 August 2022 (Wednesday) Faculty of Engineering, B. Uludağ University, Türkiye		
Hours	Lecturers	Title
09.00-09.40	Dr. A. B. Etemoğlu	Energy and Exergy Analysis of Organic Rankine Cycles
09.40-10.20	Dr. T. H. Karakoç	Exergy analysis of UAV propulsion systems
10.20-11.00		EXERGY COURSE EXAM
11.00-11.15		Break (Q & A)
11.15-11.45	Dr. Z. Söğüt	Entropy Management and Application
11.45-12.15	Dr. Mustafa Özilgen	Exergy Analysis in Food and Pharmaceutical Industries
12.15-12.45	Dr. I. Dincer	Novel Energy Topics and Exergy Analysis, and Future Directions
12.45-13.15		Certificates and Awards Ceremony and Closing Remarks
13.15		Closure

PRINCIPAL LECTURERS	
Prof. Dr. Ibrahim Dincer	Ontario Tech University, Canada & Yıldız Technical University, Türkiye
Prof. Dr. Yunus A. Cengel	University of Nevada at Reno, USA
Prof. Dr. Arif Hepbasli	Yaşar University, Türkiye
Prof. Dr. Adnan Midilli	Yıldız Technical University, Türkiye
Prof. Dr. Mustafa Özilgen	Yeditepe University, Türkiye
CONTRIBUTORS	
Prof. Dr. Akın B. Etemoğlu	Bursa Uludağ University, Türkiye
Prof. Dr. T. Hikmet Karakoç	Eskişehir Technical University, Türkiye
Prof. Dr. Ziya Söğüt	PiriReis University, Türkiye

Location: Bursa Uludağ University – Automotive Engineering Department, Bursa, Türkiye (www.uludag.edu.tr)
Notes: Although the course language is Turkish, course notes and presentation documents will be available in English.
Honorary Chair: A. Saim Kılavuz (Rector of Bursa Uludağ University, Türkiye)
Coordinator: Akın B. Etemoğlu (Dean of Engineering Faculty, Türkiye)
Organizing Committee: Recep Yamankaradeniz and M. Ziya Söğüt (Organizing Chairs), Nurettin Yamankaradeniz, Burak Türkan, Mücahit T. Uysal
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Info on Course Details: Please visit www.uludag.edu.tr/ekserji