**ETM 515**

**Fossil Fuel Technologies**

**Fall 2021-2022**

**Course Syllabus**

**Instructor**

Dr. Murat Çınar, [murat.cinar@sabanciuniv.edu](mailto:murat.cinar@sabanciuniv.edu), cinarmura@itu.edu.tr

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**Course Policies**

* Attendance (physical or online) is mandatory and will be recorded.
* Lecture slide sets will be available at SuCourse+.

**Evaluation Policy**

* Course grading will be based in-class contribution, quiz and assignments.
* Assignments will be posted to SuCourse+.
* Grades will be announced via SuCourse+.

**Course Material and References**

There is no required textbook for the course. Instead, we will use various reading material including book chapters, papers and reports. Some useful references follow:

* Giuliano, F.A. (Ed.) (1981) ***Introduction to oil and gas technology***, Second edition. Intercomp. Resource Development and Engineering, Inc. Houston, Texas.
* Dyke, K. Van (4th Ed. )(1997) ***Fundamentals of petroleum***, The University of Texas at Austin, Austin, Texas (1997)
* Downey, M. (2009) ***Oil 101***, Wooden Table Press,
* Clark, N. J. (1969), ***Elements of Petroleum Reservoirs***, Society of Petroleum Engineers, Richardson, TX.
* Selley, R.C. (1997), ***Elements of Petroleum Geology***, Academic Press, London.
* **Petroleum Resource Management System** (2018), Society of Petroleum Engineers.
* ***Guidelines for Application of the Petroleum Resources Management System,*** (2011), Society of Petroleum Engineers.
* Tester, J.W. et al., (2006), ***The future of geothermal energy, Impact of Enhanced Geothermal Systems on the United States in the 21st century***, MIT report.
* Kural, O., (Ed.) (1994), ***Coal Resource, Properties, Utilization, Pollution***, İstanbul Turkey.
* Stober, I., Bucher, K., (2013), **Geothermal Energy: From Theoretical Models to Exploration and Development**, Heidelberg: Springer.

**Course Schedule**

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| **ETM 515**  **Fossil Fuel Technologies** | | | | |
| **Date and Time**  *(Sat. 13.00-15.45,*  *Tue 19.00-21.45)* | | | **Topic** | **Instructor** |
| **Week-1** | 27th Nov. | Saturday | Introduction to fossil fuels | Murat Çınar |
| 30th Nov. | Tuesday | Petroleum: Origin and Exploration | Murat Çınar |
| **Week-2** | 4th Dec. | Saturday | Petroleum: Drilling and Production | Murat Çınar |
| 7th Dec. | Tuesday | Enhanced oil recovery and unconventional resources | Murat Çınar |
| **Week-3** | 11th Dec. | Saturday | Coal Technologies | Murat Çınar |
| 14th Dec. | Tuesday | Unconventional Coal Technologies: gasification, CBM | Murat Çınar |
| **Week-4** | 18th Dec. | Saturday | Geothermal energy | Murat Çınar |
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