**ETM 501**

**Energy: Economy and Politics**

**Fall 2021-2022**

**Course Syllabus**

**Instructors**

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**Learning Outcomes**

Upon successful completion of this course, students are expected to be able to:

* Categorize primary energy sources along with their worldwide distribution, supply-demand relations and associated production technologies.
* Discuss the relative advantages and disadvantages (in terms of investment requirements, environmental impact and political risks) of using traditional fossil fuels (oil, natural gas, coal), renewable energy sources (hydro, solar, wind, biomass) and nuclear energy.
* Explain the dynamics of energy supply chains and energy markets with particular focus on electricity as the most usable form of energy.

**Course Policies**

* Attendance (physical or online) is mandatory and will be recorded.
* Partial (not full) lecture slide sets will be available at SuCourse+.

**Evaluation Policy**

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

**Course Material and References**

There is no main textbook for the course. Instead, we will use various reading material including book chapters, white papers and reports. Below, we list a number of sample reading material and resources. Additional readings will be posted at SUCourse from time to time.

* US Energy Information Administration (EIA) – Energy Explained webpage. Entry level.

<https://www.eia.gov/energyexplained/>

* IEA World Energy Outlook Reports

<https://www.iea.org/topics/world-energy-outlook>

* International Energy Agency (for a wide variety of free reports)

<https://www.iea.org/>

* BP Statistical Review of World Energy Reports

[www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html](http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html)

* BP Energy Outlook

[www.bp.com/en/global/corporate/energy-economics/energy-outlook.html](http://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html)

* The World Nuclear Industry Status Reports

<https://www.worldnuclearreport.org/-The-Annual-Reports-.html>

* Renewables Global Status Reports

https://www.ren21.net/reports/global-status-report/

* International Renewable Energy Agency (IRENA) publications

<https://www.irena.org/publications>

* World Energy Council publications

www.worldenergy.org/publications/

* The Economist Journal: Articles and Special Reports on Energy

www.economist.com/topics/energy-industry

* McKinsey consulting:

[www.mckinsey.com/industries/electric-power-and-natural-gas/how-we-help-clients](http://www.mckinsey.com/industries/electric-power-and-natural-gas/how-we-help-clients)

* Deloitte consulting:

www2.deloitte.com/global/en/industries/energy-resources-industrials.html

* The Oxford Institute for Energy Studies

[www.oxfordenergy.org](http://www.oxfordenergy.org)

* Wood Mackenzie

<https://www.woodmac.com/our-expertise/capabilities/power-and-renewables/>

* IICEC (Sabanci University Istanbul International Center for Energy and Climate)

iicec.sabanciuniv.edu/

* Shura Energy Transition Center

https://shura.org.tr/en/

* The Quest (Book): Energy, Security, and the Remaking of the Modern World. D. Yergin. 2012. (highly recommended. Turkish version title: Enerjinin Geleceği, 2 cilt)
* The Prize: The Epic Quest for Oil, Money and Power: D. Yergin. 1990. Turkish version title: Petrol. Iş Bankası Yayınları.
* The Boom (Book): How Fracking Ignited the American Energy Revolution and Changed the World. Russell Gold. 2015.
* Oil 101 (Book). Morgen Downey. 2009.

**Podcasts**

Energy-related podcastsoffer a fun way to learn**.** The podcasts that I follow are:

* The Energy Transition Show with Chris Nelder (full episodes require payment)
* Redefining Energy
* The Energy Gang
* Columbia Energy Exchange
* The Interchange
* Energy Policy Now
* DNV GL Talks Energy
* Energy 360
* The Oxford Institute for Energy Studies

For a long list: <https://blog.feedspot.com/energy_podcasts/>