

MIE1241 – Energy Management

Fall 2024

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Contents	Date	Notes
Introduction to Energy Usage	Sep. 09	
Concepts of Energy Management	Sep. 16	
Economic Analysis and Life-Cycle Costs	Sep. 23	A1
Energy Bills, Rates and Energy Audits	Sep. 30	
Energy Bills, Rates and Energy Audits	Oct. 07	Q1
No class - Thanksgiving Day	Oct. 14	
Energy Management – Lighting and HVAC	Oct. 21	A2
Fall Term Reading Week	Oct. 28	
Energy Management in Buildings – LEED	Nov. 04	
Electrification and Advanced Energy Systems	Nov. 11	A3
Transportation Systems	Nov. 18	Q2
Final Project Presentation – Session 1	Nov. 25	
Final Project Presentation – Session 2	Dec. 02	

Tentative Mark Composition:

- Assignments (3) / Quizzes (2) 60%
- Course Project 40% (Topics provided on September 25th, confirmation due October 16th)

Recommended Bibliography

1. **Wind Energy Handbook, by Burton, Jenkins, Sharpe and Bossanyi. 3rd Edition (2021). John Wiley and Sons. ISBN: 978-1119451099.**
2. **B.L. Capehart, W.C. Turner, and W.J. Kennedy, Guide to Energy Management, 8th Edition, International Version The Fairmont Press, 2016.**
3. F. Kreith and D.Y. Goswami, Energy Efficiency and Renewable Energy Handbook, CRC Press, 2018.
4. Y. Cengel and A. Ghajar, Heat and Mass Transfer: Fundamentals and Applications, 5th Edition, McGraw-Hill, 2015.
5. Michael Boles, Yunus Cengel and Mehmet Kanoglu, Thermodynamics: An Engineering Approach, 10th Ed., McGraw-Hill, 2024.

6. ASHRAE Handbook - Fundamentals, American Society of Heating Refrigerating and Air-Conditioning Engineers

Assignments

1. Basic Energy Concepts (10%)
2. Energy Bills and Rates (10%)
3. Lighting and HVAC (10%)

Additional Notes

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