Everyday Engineering: Understanding the Marvels of Daily Life

Fall Session

1. Engineering and Technology in Your World
2. Your House as an Engineered System
3. Three Structural Systems for Load Bearing
4. Platform-Framed Housing Construction
5. The Building Envelope
6. Site Design and Storm Runoff
7. Dam, Reservoir, and Aqueduct Design
8. Water Treatment and Distribution
9. Waste Water Disposal and Treatment
10. Fossil Fuels: Coal, Oil, and Natural Gas
11. Power Generation from Coal
12. Oil, Gas, and Nuclear Power
13. Renewable Sources of Electricity
14. Electrical Power Transmission; The Grid
15. Electrical Power Distribution
16. Everyday Thermodynamics: Refrigeration

Winter Session

17. Heating, ventilation, and Air-Conditioning
18. Home Energy Efficiency
19. Passive Solar and Net-Zero-Energy Homes
20. The Plain Old Telephone Service
21. The Global Telecommunications Network
22. Cellular Phone Technology
23. Satellites and Satellite Communications
24. Simple Machines Around the House
25. User-Centered design
26. The Internal Combustion Engine
27. Torque, Power, and Transmission
28. The Drivetrain
29. Suspension, Steering, and Braking
30. Highway Engineering

Spring Session

31. Traffic Engineering