Lecture, Homework, and Paper Schedule

	Monday	Wednesday	Friday
Week 1	**March 30 – Energy Landscape** Lecture 1.1 Course introduction Global energy landscape	**April 1 – Energy Landscape** Lecture 1.2 US energy landscape Economic considerations	**April 3 – Wind** Lecture 2.1 Wind energy sector overview Wind turbine performance
Week 2	**April 6 – Wind** Lecture 2.2 Wind resources: spatial variation	**April 8 – Wind** Lecture 2.3 Wind resources: temporal variation	**April 10 – Wind** **Homework 1 Due** Lecture 2.4 Linear momentum actuator disk theory
Week 3	**April 13 – Wind** Lecture 2.5 Angular momentum	**April 15 – Wind** Lecture 2.6 Aerodynamics	**April 17 – Wind** **Homework 2 Due** Lecture 2.7 Blade element momentum (BEM) theory
Week 4	**April 20 – Wind** **Paper Proposal Due** Lecture 2.8 Turbine design with BEM	**April 22 – Wind** Lecture 2.9 Limits of BEM theory Characteristic performance	**April 24 – Wind** **Homework 3 Due** Lecture 2.10 Structural considerations
Week 5	**April 27 – Wind** Lecture 2.11 Wind turbine control	**April 29 – Wind** Lecture 2.12 Wind farms Turbine wakes	**May 1 – Wind** Lecture 2.13 **Homework 4 Due** Wind turbine economics Offshore wind
Week 6	**May 4 – Hydropower** Lecture 3.1 Principle of operation Types of development Resource variability Technology status	**May 6** Lecture 3.2 Hydropower operation	**May 8 – Hydropower** **Homework 5 Due** Lecture 3.3 Hydropower operation (cont.) Specific speed
Week 7	**May 11 – Hydropower** Lecture 3.4 Turbomachinery	**May 13 – Hydropower** Lecture 3.5 Cavitation Impulse turbines	**May 15 – Hydropower** **Draft Paper Due** Lecture 3.6 Energy storage
Week 8	**May 18 – Tides & Currents** Lecture 4.1 Tidal resources Tidal range generation	**May 20 – Tides & Currents** Lecture 4.2 Tidal currents River and ocean currents Current turbines	**May 22 – Tides & Currents** **Homework 6 Due** Lecture 4.3 Turbine efficiency in confined flow

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Week 9	**May 25** *Holiday – No Lecture*	**May 27 – Tides & Currents** **Peer Reviews Due** Lecture 4.4 Cross-flow turbines	**May 29 – Tides & Currents** **Homework 7 Due** Lecture 4.5 Cross-flow turbines (cont.)
Week 10	**June 1 – Wave** Lecture 5.1 Resource Power generation	**June 3 – Wave** Lecture 5.2 Point absorbers	**June 5 – Wave** **Homework 8 Due** Lecture 10.3 Wave energy converter archetypes