

Clouds, Aerosols & Climate – Spring 2011

Special Topics - 22216 - EAS 8802

Instructor: Prof. Irina N. Sokolik

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Meeting Time: Mondays 11:05-12:55 PM

Meeting Place: L1175

Office hours: by appointment

Course Summary

This course will review the state of the clouds, aerosols and climate science, focusing on the major long-standing and emerging problems in the field. Discussion topics will cover fundamentals of aerosol and clouds; long-term data records and trends; representation of clouds and aerosols in numerical simulation models (CRM, regional models, and GCMs); current state and challenges in quantifying the impacts of clouds and aerosols on the Earth's energy balance, hydrological cycle, carbon cycle, and major biogeochemical cycles; interactions within the Earth system framework (coupling and feedbacks); and future projections.

The course evaluation will be based on 1) participation in class discussion, 2) summary reports on course readings (class presentations), and 3) class project.