

Course: Chem 429

Instructor: Eric McCalla

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Brief course description:

This course, "Chemistry of Energy", explores a wide variety of topics related to energy use in modern society. There is a strong emphasis on technologies where Chemistry is making important contributions. Topics include a survey of fossil-fuel based energy sources (e.g. the thermodynamics behind coal-power plants), as well as technologies required for sustainable energy harvesting such as photovoltaics, fuel cells, and rechargeable batteries. Each topic is explored to understand both the Chemistry involved and the environmental impact.

Method of Delivery:

Live zoom lectures will occur during scheduled class time, these will include group work in breakout rooms and group discussions. In the event that a particular live lecture is impossible (e.g. power failure) a recorded lecture will be provided.

Evaluation Scheme:

50% take-home assignments (five assessments at 10% each, a week to complete each)

40% term-long project which includes a presentation (alone or in pairs)

10% participation: for participation both during lectures and in asking questions during student presentations. Note: this year students can opt out of the participation component, in which case this 10% is re-distributed evenly between the other assessments.