

Proposal for a Master's Degree in Climate Science and Solutions (CSS)

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What follows are my thoughts about a Masters in Climate Science and Solutions. What's proposed reflects both my thinking and the ideas generated during our group discussion at the July 2008 meeting.

Concept:

This degree would be offered at several participating institutions and/or consortia hopefully geographically distributed around the US. I think that having a set curriculum for all participating students would help assure employers of these individuals that CSS graduates would have a fundamental grasp of specific content areas important to climate change and its management.

As envisioned, the program would be 15 months long, starting in June and ending the following August. The first summer would be required for those students needing to take prerequisite courses they might be lacking. Each full academic term would consist of five 3-credit courses. In addition, a series of intensive 3-week classes would be offered during winter break.

The program would conclude with a summer internship/cooperative experience during which teams of the students, perhaps from different campuses, would work with program partners from state and federal agencies, the private sector, and NGOs, on specific projects. In place of a thesis, students might prepare a report for the sponsoring agency.

As per our conversation earlier this week, some campuses might wish to offer selected portions of the program and others might focus exclusively on providing training for professionals wishing to move into the climate science arena. I also believe that, given the likelihood that relatively few campuses may be able to offer all the courses in the program, cooperative ventures between campuses will be useful.

Proposed curriculum:

Fall: Climate Science and Climate Change Impacts

- Basics of Climate and Atmospheric Sciences
- Climate Change and the Biosphere
- Climate Change and Global Water Resources
- Climate Change and the Working Landscape
- Energy-Climate Relationships

Each class 3 credits for a total of 15 credits

Winter Break: Short Courses (3 weeks)

- Climate Change and Human Health
- Communicating with the Public about Climate Change
- The Economics of Carbon
- Climate Change and Consumerism

Each class 1 credit for a total of 4 credits

Spring: Climate Solutions

- The Role of Green Technologies/Renewable Energy in Managing Climate Change
- Climate Policy: Strategies for Reducing Greenhouse Gas Emissions
- Quantitative Skills: Risk Assessment, Cost-Benefit Analysis, Decision-making
- Organizational Behavior: Regulators, the Public, and Conflict Resolution
- Climate Seminar: nation-wide weekly seminar linking all participants

Each class 3 credits for a total of 15 credits

Summer: intern/coop program with partners

Summer experience: 6 credits

Total credits in the Masters degree: 40