

IPRO 331
Global Warming & Community Outreach
Project Plan

Dr. Peter Lykos (Faculty Advisor)
Carol DeBiak (Science & Engineering Librarian)
Lidia Calcaterra (Faculty Advisor)
Suzanne von Leuschner (Faculty Advisor)

Illinois Institute of Technology
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1. Team Information

a. Roster

- i. Kamil Bober (kbober@iit.edu)
- ii. Sapna Desai (sdesai32@iit.edu)
- iii. Hashem Abu-Amara (habuama@iit.edu)
- iv. Arjun Jani (ajani2@iit.edu)
- v. Haein Cho (hcho10@iit.edu)
- vi. Daria Haznar (dhaznar@iit.edu)
- vii. Arturo Gonzalez (agonzal8@iit.edu)

b. Strengths, Needs, & Expectations

- i. Individuals of the group will be actively involved in researching and putting together presentations and contacting organizations to present at. Several team members are proficient at using Microsoft Power Point and library databases.
- ii. To be successful, group members will need to develop a strong understanding of global warming and its relevant issues. The group also needs to improve their leadership and public speaking skills.
- iii. The team expectations are to inform and reach out to over 1000 people of different backgrounds including students, faculty and senior citizens about the effects and possible solutions of global warming.

c. Team Identity

- i. IPRO 331: Global Warming and Community Outreach
- ii. Motto: Educating people about the scientific facts concerning global warming.

2. Team Purpose & Objectives

- a. Utilize previous presentations to inform and educate the public about the cause, impact, and responses to global warming.
- b. Divide the overall issue into major aspects including the ones set by previous IPRO's while adding our own.

- c. Present material to larger and more diverse audiences in order to create widespread awareness about global warming.
- d. Discuss opposition to global warming and try to refute those claims.
- e. Use previous research and presentations but taking a more systematic approach when creating presentations.
- f. Devise creative ways to present the information such as, but not limited to, videos.
- g. Provide surveys at the end of each presentation to receive feedback.
- h. Create an IPRO 331 website and enhance it with updated research. Also to make is more accessible to the general public and make them aware of it. This will allow anyone anywhere to access information on global warming.
- i. Enhance team members' public speaking abilities via interactions during class along with mock presentations throughout the semester.
- j. Each member is expected to organize and present at three different locations per month at least throughout the semester.

3. Background

- a. This IPRO is not sponsored by a company and there are no customers or target audience. We are trying to raise the awareness of anybody and everybody.
- b. People began to start researching the possibility of global warming in the early 1900's. German scientist Guy Stewart Callendar was the first to compile international temperature recordings from other scientists to conclusively state that the Earth's temperature had indeed risen between 1890 and 1935 by as much as half a degree Celsius. He was also the first to propose the idea that carbon dioxide emission by the burning of fossil fuels leads to the greenhouse effect. The U. S. Weather Bureau's Division of Climate and Crop Weather confirmed his findings that the temperature had indeed warmed. . This paved the way for future climate research. According to a report put out by the IPCC in 2007, global temperatures could increase by 3°- 4° C by the year 2099. Such an increase in global temperatures would cause sea levels to rise by almost 0.6 meters and would destroy our planets key agricultural areas. Despite the severity of the problem,

very little has been done to slow down the process of global warming. With several groups claiming that human-caused global warming is a myth, many people do not understand the complete severity of the problem and what they can do to help.

- c. The problem this group will be facing is the lack of public knowledge about global warming. Although information about developing technologies and the latest science pertaining to global warming will be included in the presentation, the actual presentation will not need any special technologies.
- d. Most organizations concerned with global warming provide data and solutions to the problem, but they do a poor job when it comes to sharing this information with the public. Previous IPRO groups were successful in reaching out to several thousand people in the Chicago-land area. IPRO 331, Global Warming and Community Outreach, began in the fall of 2007, advised by Professor Lykos with the help of Carol DeBiak, from Galvin Library. During this term, the IPRO group successfully compiled a 50 minute presentation covering a vast majority of the scientific analysis of global warming. They presented in teams of two people each at De La Salle High School at the end of the semester. The following IPRO groups revised the presentation, created posters and brochures, and focused on presenting to as many people as possible.
- e. There are no obvious ethical issues concerning the problem.
- f. The ignorance of the public to the severity of global warming has the potential to be very costly to our society in the future. If awareness is not raised and solutions aren't put into place soon, temperatures will continue to rise. At a certain point, great flooding will be a major problem, as will starvation due to destroyed agricultural land. In a worst case scenario in which temperatures would rise by 6° C, the IPCC predicts that very few humans would be able to survive. It will most likely not get to that point, but the longer we wait to act, the more damage will be

done, and the more expensive it will be to fix it.

- g. The group will break up into several sub-groups to research topics concerning the cause, effect, and solutions to global warming. The presentation prepared in Fall 2009 will be revised to include the latest facts about the problem, including the views of the skeptics of global warming. Post-presentation surveys will be given to assess the success of each presentation. This feedback will be used to adjust and improve the presentation.
- h. The presentation prepared will be centered around the 2007 IPCC report on climate change and an article from “Chemical and Engineering News” called *Global Warming and Climate Change* by Stephen K. Ritter which can be found at <http://pubs.acs.org/cen/coverstory/87/8751cover.html>.

4. Team Values Statement

- a. Desired behaviors from the members include attending every meeting of IPRO in a timely manner. Every member is also expected to communicate clearly about availability and other obligations so work can be planned accordingly. Also each member is expected to contribute towards classroom discussions.
- b. The group plans on communicating and resolving issues through iGroups discussions and the use of Gmail and Google Docs. Any issues that cannot be resolved within the group members will look to the faculty advisor for guidance.

5. Methodology/Brainstorm/Work Breakdown Structure

- a. Approach to Solving the Problem/Raising awareness
 - i. Dividing the issue into subgroups using the ones from past IPROs as well as some of our own
 - ii. Dividing up the members of our team into groups of two or three to focus in on one subgroup and research it.
 - iii. Coming together as a team to combine our research and systematically put together presentations which incorporate all the subgroups

- iv. Finding public forums in which to present our research as well as prior research.
- v. This will allow us all to give presentations stating the problem, the cause, and the response. Presentations will be conducted based on power point presentations. They will also be adjusted based on our audience. For example, we cannot give an elaborate presentation with complex terms to an audience of kindergarteners.
- vi. Surveys will be given after each presentation to assess how effective the presentation is. We will modify the presentation based on the feedback. We will keep track of the audience reactions to our presentation to see whether we improve over time.
- vii. There is enough time and resources to fulfill our goals for this semester.

b. Team Breakdown:

Research Subgroups:

- 1. Alternative Energy
- 2. Climate Engineering
- 3. View Of Skeptics

6. Expected Results

- a. Through the community outreach presentations, team members are expected to improve their presentation/communication skills. Part of the improvement process will make use of peer-evaluation critique sheets, where team members can comment on each other's presentations.
- b. The main expectation for this IPRO is for various communities in the Chicagoland area to better understand the scientific data and facts that conclude Earth's temperature is indeed rising. This will be done through the team's explanation of events during the presentation.
- c. It is the team's hope that a significant difference will be observed between the pre- and post-tests administered, in that audience members will have a better understanding of the topic.

- d. The only products resulting from this IPRO would be the PowerPoint presentations and an updated website. However, whether or not the PowerPoint presentations will be incorporated into the website for public use will be at the digression of the IPRO team members.
- e. The expected results will directly address the ‘problem’ the audience faces in understanding the scientific research backing global warming. Any questions that arise can hopefully be addressed by team members, or given further resources to find an answer, such as the updated IPRO 331 website. Our final goal/deliverable is not tangible; it is a measure of how well the audience perceives the information being presented.
- f. Our results will be a direct measure of the solution framework – it will determine whether focused lectures are more efficient than one broad presentation, depending on the type of audience. Based upon audience reaction and feedback, changes can be made to the presentation. (Broad presentations as well to get the general concept of Global Warming across to the community).

7. Budget

Item	Description	Cost(\$US)
Transportation	Gas, Parking, Tolls	200
Printing	Brochures, Surveys, Questionnaire	150
Miscellaneous	Food, snacks, Prizes...etc	150
	Total	500

8. Tasks and Milestone Events

- a. February 5th - Project Plan due
- b. February 25th – Midterm Reviews
- c. March 26th- Ethics Reflective Report
- d. April 9th – Final Project Report (first draft)
- e. April 19th - Abstract/Brochure
- f. April 19th - Poster
- g. April 22nd - Final Presentation
- h. April 30th - Final Project (final version)

Due to the nature of our IPRO, most of our presentations given to the public will be on a first come, first serve basis, and this will mean that presentation dates will not be known until around a week ahead of time. The community presentations will be documented in the final presentation on IPRO day.

9. Team Member's Positions:

- a. Team Leader: Sapna Desai
- b. Contact Leader: Kamil Bober
- c. Transportation: Arjun Jani
- d. Minutes: Daria Haznar
- e. Freshman Intern: Arturo Gozalez
- f. IPRO Office Contact: Haein Cho
- g. Budget : Hashem Abu-Amara