UGS303 BIOTECHNOLOGY AND WORLD HEALTH
TEAM PROJECTS
Spring 2010

You are responsible for selecting your own team and project topic. A designated member of each team must e-mail the professor a <u>list of all the names (first and last names) and college affiliations</u> of the team members. Teams should consist of four students and each team must have representation from a minimum of *two different colleges* on campus.

Deadlines:
>   Formation of Teams: Tuesday February 9, 2010
>   Approval of Proposed Topic Area: Tuesday February 16, 2010
>   Team Progress Report #1: Tuesday February 23, 2010
>   Team Progress Report #2: Friday March 26, 2010 (in Discussion)
>   Oral Presentations: April 20 – May 7, 2010
>   Written Report Due: Thursday April 29, 2010

Project Description:
Your team should select a project topic under <u>one of the following six options</u>. *Creativity, difficulty of project, and going "above and beyond" will be reflected in the project grade.* For all projects, concepts learned from class should be integrated into your team's solution. Specific project topics must be approved by the professor.

(1) Public Health Outreach (Service Learning)*. You and your team should get involved with our local Austin and surrounding communities, or the broader global community, to provide a valuable public health service. This activity should be motivated by adequate data, research and statistics demonstrating a particular need. The public health activity should be original and should not duplicate other existing efforts. These activities can range from providing in-class demonstrations of important health issues to classrooms in underserved regions (these can be videotaped to illustrate your work) to creating actual educational pamphlets (geared according to the intended "audience") or health-related materials or "health packs" distributed to remote communities in need, classes, teens, homeless shelters, etc.


*Your team is more than welcome to raise funds to help cover any expenses for your project, as long as all funds are adequately tracked and acknowledged (written documentation for all funds, including team member donated funds, must be provided as part of the appendix to the written report). Any funds raised can only be used for expenses directly related to the public health service activity as part of this project.

(2) New Government Policy on Health Issues. For this project, you are asked to provide a detailed persuasive argument for new policy (in the U.S.) related to public health. Your plan should also include potential pitfalls. This proposed new policy should be in addition to existing laws (related existing laws should be analyzed). Data and statistics should be presented to create your case. Plans for how one could promote your plan for actual legislative consideration should be provided. Although not required, contact with appropriate legislative or government officials related to your plan would strengthen the project and may actually lead to change (note: the Texas legislature is in session this semester). One example might be trying to increase awareness for implementing legislation that would make speeding tickets based on momentum rather than speed (momentum = mass X velocity, and thus factors into account the weight of the vehicle; i.e., a speeding ticket for a large truck going 80 mph would be more than a ticket for a motorcycle traveling the same speed; a large speeding truck would have more devastating health implications for the driver and others injured in a potential accident compared to the motorcycle).
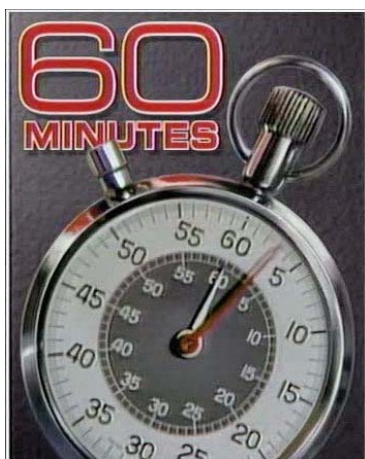
(3) "60 Minutes" Exposé on Health-Related Issue. For this project, you are asked to provide a detailed description and supporting data to demonstrate a health-related "truth" or mis-conception – something that will raise our awareness. You can collect research to uncover information on adverse health effects for something we naturally assume is provided within a safe usable range (e.g., the health effects of cell phone usage, or the amount of nitrates in meat). Or, you can uncover some unsafe health practice in the community and provide data to support your argument (e.g., poor work conditions or air quality in a building on campus). Or, you can frame a case to link seemingly innocuous items to adverse consequences (e.g., the overuse of strollers by parents/caretakers and childhood obesity). Feel free to collect your own data, if necessary.

(4) Point Counter Point for Current Health Debates. You are asked to provide a detailed point counter point analysis of an *existing* health care issue or policy (in the U.S., or elsewhere in the world; make sure to provide regional context). Some potential examples include, but are not limited to: vaccinations in young children and mandatory vaccination requirements, federally-funded family planning/abortions, raising taxes on foods with saturated fats and refined sugar, etc. (other topics must be approved by professor). Both sides of the issues need to be presented and supported with detailed data and statistics.

(5) Global Health Problem-Solution. Your goal is to design a feasible and unique "solution" for a particular present health issue. Your team should present motivation for the need (relate to target region of the world), back-up research/data, technical details of the "design" or "solution", implementation plans if applicable, information on other "competing" technologies and how your new solution or design is better or unique (what else exists), and a cost analysis. An example may be to design a better system for ventilation in areas that heavily utilize wood burning stoves. Your project may focus on the technical design, or may provide more of a detailed plan on how to assemble existing components to create a unique solution that does not already exist in a particular region of the world.

(6) US Health Care Plan. President Obama has contacted your team of health professionals to serve as consultants on his health care agenda. Prepare a plan for a revised health care plan for the U.S. (or if your team believe that the current situation is ideal, then this needs to be fully justified). Provide detailed information on other health systems in several other countries (pros/cons) as supporting information. Your health care plan needs to define what is paid for by the government, private finances, etc. Your plan needs to be fully justified and supported by data and statistics where appropriate. Include current "opinion" as needed. The report needs to also include information on the current U.S. system and statistics that demonstrate why a change is needed (if you propose a change), and feel free to comment on some of the proposed plans in discussion. As part of your plan, consider and address our class discussions and readings on health care as a fundamental human right.
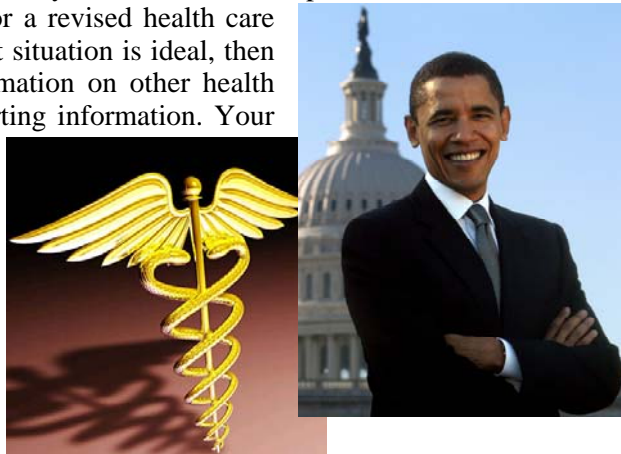
(7) Emerging Technologies for Global Health Issues. This report should consist of a thorough analysis of a particular technological development that could potentially have a major impact on global health. For example, the development of portable, low-cost imaging systems make this technology more affordable and accessible to remote sites and clinics who otherwise could not afford more expensive, conventional instruments. As part of your project, you would evaluate the need, assess the competition in terms of traditional technologies, etc. Interviews with those working directly in these areas are encouraged.

Report Details:

Grading:
The written report will be graded on technical accuracy, creativity, writing skills, and organization. Grades for the oral presentation will be assigned to each team based on the relevance and accuracy of the information presented, organization, presentation skills, and confidence/accuracy in answering questions. Going "above and beyond" in the project will be reflected in the grading of the project.

Written Report (20% of course grade):
A written project report will be required from each team and one grade will be given for the report. The final typed report must be received at the beginning of the class period in which it is due. Each team must prepare a written report that adheres to the criteria listed below. The final report should be stapled (preferred) or bound. Figures and tables are highly encouraged, and must be provided within the text where cited and are included in this page limitation. All information and data should be *based on factual, published literature (peer-reviewed journals) and/or reputable online resources*. Cite primary sources of information only. For example, Wikipedia is not a primary source, and is not considered a credible reference. *Interviews* with individuals who have appropriate credentials and expertise are considered valid and encouraged.

(1) Title Page: include the title of your report, class title, date, and names of all team members
(2) Abstract (brief comprehensive summary of your paper; 1 page maximum)
(3) Body of Report (divided into appropriate sub-sections): 10 pages maximum length, including all necessary figures and tables (but not including references, abstract and title page)
 (4) References: not included in maximum page length; cite full references with all authors, article title, journal title, year, volume and page numbers (see professor or TA for samples)
(5) Appendices* (optional): information in appendices is considered supplemental, and NOT essential (i.e., the report should be self-standing without the appendices); any essential information needs to appear in the body of the text
(6) Font Size: no smaller than 11 point font
(7) Line Spacing: use 1.5 line spacing
(8) Margins: use 0.75 inches (minimum) on all sides

Note: Additional materials pertinent to the project (e.g., videos, prepared literature or materials for public health activity) are acceptable and should be submitted at the time of the written report.

Oral report (15% of course grade):
Oral presentations will be given in class during the scheduled lecture time (random selection of presentation order). Each presentation will consist of a 15-minute presentation to the class, the professor and TA, followed by 5 minutes for questions from the entire audience. Each member of the team must participate in the presentation, and each member is responsible for understanding all aspects of the project. You must provide your own laptop or post your presentation for downloading on webspace or bring a USB drive with your presentation for use with the computer provided in the classroom. Back-up printed copies of your slides for use with the doc-cam are recommended in case of technical difficulties. Students are asked to bring two hard copies of their slides on the day of their presentation.

You should treat this as a professional presentation. You should concisely discuss a summary of your proposed project, and not merely present a narrative of what your team did. Include similar information as presented in the written report (remember though, that the class will not have read the report, so your talk should be an independent lecture to educate them on your proposed plans). Each member of the team must participate in the presentation, and each member is responsible for understanding all aspects of the project.

References and Plagiarism: You always need to cite all facts and information within the text of an article (you may cite using a number or by listing the author and year), and then list the full references in the literature cited section. In general, be careful not to plagiarize. All wording in your articles need to be your own (copying information from articles or the internet is considered plagiarism). All sources of information need to be cited in your report (make sure to only use credible, primary resources). All members of the group are held responsible for ensuring that the final team report is an original document.