

GEOG 37100, Rural Water Supply in the Developing Regions
Spring 2017
Monday and Thursday 14:45 to 16:00
HN 1022

Instructor: Dr. Mohamed Babiker Ibrahim
Office: Hunter North 1948
Telephone: 212-772-5267
Email: mibrahim@hunter.cuny.edu. Please be sure to use GEOG. 371 in you subject line and sign your full name as it appears in CUNYfirst to any message you send me.

Office hours

Monday from 4:30 pm to 6:00 pm
Thursday from 4:30pm to 6:00 pm
Or by Appointment

No textbook. There will be hand out notes

Goals/ objectives and expected student outcome:

The main goal and objective of this class is to study and understand aspects of rural water supply, sanitation and hygiene education in the developing countries. The course will discuss the relationship between water, sanitation and hygiene education besides history, policies, management, gender, consumption, challenges and sustainability of rural water supply. It will also discuss the different types of sanitation facilities that are used by the rural people of the developing nations.

By the end of this course, you should have a better understanding of the complex and dynamic interrelations between and within water and sanitation systems in the developing countries with much emphasis on policies, sources, consumption, challenges, and sustainability of rural water supply on the one hand and the types of sanitation services and their problems in the rural areas on the other.

Expected Learning Outcomes:

- A general and broad knowledge of the major issues of the rural water supply, sanitation and hygiene education in the developing countries.
- Understand water as a holistic approach that links the process of environmental, economic and social change together now and in the future.
- Understand the importance of water, its conservation, storage and handling to avoid water related diseases.
- Knowledge of some of the key geographic, environmental and social justice issues facing our world today.
- Ability to think and write critically about these issues.

LECTURE SCHEDULE

Dates	Lecture	Readings
January 30 and February 2	Availability of water in the world. Relationship between water, sanitation and hygiene	Biswas, A. K. 1999. Water Crisis: Current Perceptions and Future Realities. <i>Water International</i> 24(4); 363-367. UNICEF. 2006. UNICEF Water, Sanitation and Hygiene Strategies for 2006-2015. Economic and Social Council. New York. http://www.unicef.org/about/execboard/files/06-6_WASH_final_ODS.pdf
February 6 and 9	History of rural water and sanitation since 1960s	Biswas, A. K. 2004. From Mar del Plat to Kyoto: An Analysis of Global Water Policy Dialogue. <i>Global Environmental Change</i> 144:81-88
February 15 and February 16	International and national water policies and their problems	February 13, NO CLASSES, class meets 2/16 World Health Organization (WHO). 1990. <i>Community Management of Rural Water Supply and Sanitation System: Points for Practitioners</i> . Geneva.
February 23	Rural water approaches since 1960s	February 20, NO CLASSES, class meets 2/23 Petit, O., and C. Baron, 2009. Integrated Water Resources Management: From General Principles to its Implementation by the State. The Case of Burkina Faso. <i>Natural Resources Forum</i> 33: 49-59.
February 27 and March 2	Sources of surface water	Winter, et al., 1998. Ground Water and Surface water: A Single Resource. U.S. Geological Survey Circular 1139. Denver, Co.
March 6 and 9	Sources of ground water	Winter, et al., 1998. Ground Water and Surface water: A Single Resource. U.S. Geological Survey Circular 1139. Denver, Co.
March 13 and 16	Rural water collection, storage and consumption	Thompson, John, et al. 2001. Drawers of Water II: 30 Years of change in Domestic use and Environmental Health in East Africa. London: Russell Press. http://pubs.iied.org/pdfs/9049IIED.pdf

March 20	Water quality and perception	Trevett, A.F., et al, 2004. Water Quality Deterioration: A Study of Household Drinking Water Quality in Rural Honduras. <i>International Journal of Environmental Health Research</i> 14 (4): 273-283.
March 23	MID TERM EXAM	
March 27 and 30	Water-borne diseases	Water Research Commission. 2003. Management of Water-related Microbial Diseases. Volume 1. Department of Water Affairs and Forestry. South Africa. http://www.dwa.gov.za/iwqs/AssessmentGuides/DiseaseGuide/DiseaseGuide.pdf
April 3 and 6	Challenges to rural water, population growth and water scarcity	Falkenmark, M. 1997. Meeting Water Requirements of an Expanding World Population. <i>Philosophical Transactions Royal Society London</i> 352:929-936. Falkenmark, M. 1990. Rapid Population Growth and Water Scarcity: The Predicament of Tomorrow's Africa. <i>Population and Development Review</i> 16:81-94.
April 10 to 18	SPRING BREAK	NO CLASSES
April 20	Challenges to rural water; climate change and corruption Submission of first draft of the term paper due	Kundzewicz, Z.W. and Somlyódy, L. 1997. Climatic Change Impact on Water Resources in a Systems Perspective. <i>Water Resources Management</i> 11:407-435. Davis, J. 2004. Corruption in Public Service Delivery: Experience from South Asia's water and Sanitation Sector <i>World Development</i> 32 (1): 53-71.
April 24 and 27	Types of sanitation services in rural areas	Viraraghavan, T. et al. 2011. Small Community and Rural Sanitation System. Wastewater Recycle, Reuse and Reclamation. UNESCO-EOLESS Report. Vol. II. http://www.eolss.net/Sample-Chapters/C07/E2-14-04-00.pdf Cairncross, S. 2003. Sanitation in the Developing World: Current Status and Future Solutions <i>International Journal of Environmental Health Research</i> 13:S123-S131.
May 2 and 4	Importance and application hygiene education	World Health Organization(WHO).2008. Hygiene Education. In Guidelines for Drinking-Water Quality (3 rd ed). Geneva. pp. 129-140. http://www.who.int/water_sanitation_health/dwq/fulltext.pdf

May 8 and 11	Sustainability of rural water supply, sanitation and hygiene education	World Health Organization(WHO).2008. Hygiene Education. In Guidelines for Drinking-Water Quality (3 rd ed). Geneva. pp. 129-140. http://www.who.int/water_sanitation_health/dwq/fulltext.pdf
May 15 and 18	Conclusion and review of rural water supply, sanitation and hygiene education	
May 22	FINAL EXAMINATION,	May 22, 2017

Grading system:

Mid-term examination	40%
Final examination	40%
Term paper	20%

Mid-term Exam:

The midterm exam is a take-home examination consisting of four short essay questions. You need to support your writing with examples from peer-reviewed articles.

Final Exam:

The final examination is a take-home exam consisting of 4 short essay questions. These essays should be supported with examples from peer-reviewed articles.

Please note the following guidelines for your term paper:

1. The professor must approve your topic. Choose one from the topics listed in the lecture schedule and give examples of your research from two countries.
2. The paper must be double-spaced, one inch margins on all sides, 12 point font, and at least 14 pages long plus bibliography.
3. It should include a minimum of 10 cited references from books and peer-reviewed articles.
4. The paper should include tables, maps or graphs (notate the source).
5. In case of citation of references in the text, use **APA** format (**parentheses**) and **NOT** the **MLA** format (You will be given printout examples in the class).
6. There should be a cover page showing the title, your name, course number, instructor's name and the semester (i.e. Spring 2017).
7. Sub-headings should be used in the paper along an introduction and a conclusion.
8. The bibliography should be written properly at the end of the paper.
9. The deadline for submission of the first draft of the paper is **April 20, 2017** (email attachment submissions).
10. If you have any question(s) come and see me.
11. Not following of any of these points will reduce your grade.

Attendance and Grading Policies:

1. There is a direct correlation between good grades and good attendance. Come to the class prepared, read the appropriate articles of the reading list, take notes, study for your exams and you will be successful. Attendance is taken at every class meeting.
2. I do not give incompletes (**IN**) except under the most extraordinary, and documented, circumstances.
3. The only students who will be eligible for CR/NC at the end of the semester are those who have completed all of the course requirements including all mid-term exam, term paper, and the final exam.
4. If miss an exam, you must (1) contact me within 48 hours of the missed exam, (2) present acceptable documentary evidence for your absence, and (3) arrange a make-up exam at a mutually convenient date and time. A make-up exam covers the same materials as the regular exam but will not be the same exam given as scheduled.
5. If you fail to take the final exam, you have the same 48 hours in which to contact me about a make-up exam and provide me with the appropriate documentation supporting your absence. If I do not hear from you within that time period, I will award you an exam grade of zero (0), and average that zero into your semester grade.

Please ... do not hesitate to come and see me if you have any questions.

HUNTER COLLEGE'S STATEMENT ON ACADEMIC HONESTY:

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

And I might add that creative originality and integrity are essential if you want to develop the kind of knowledge that is going to do you any good in life. When you cheat at school, the one you are really cheating is ultimately your future self.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of ACCESSABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.