

BIS 300A Introduction to Interdisciplinary Studies: Water Course Syllabus-Spring 2006

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Office Hours: Mondays, Wednesdays (11 AM-12 noon, in room 312-UW2), and by appointment. It is best to check with me ahead of time, even for a visit during normal office hours, especially if you are making a special trip for that purpose. I am in one of my offices for considerable periods every day (approximately 8-5) and will be glad to make appointments outside of the nominal office hours.

Class Times: 8:45-10:50 AM, Monday and Wednesday, Room UW2-021.

Mid Term Exam: April 26, in class.

Final Exam: June 5, in class

Writing Assignment: Four formal and four informal assignments.

Textbooks:

- “Water, Culture, and Power”, edited by Donahue, J. M. and Johnston, B. R., (Island Press, Washington DC, 1998)
- “Pillar of Sand”, Sandra Postel (W.W. Norton and Co, New York, 1999)
- “Fresh Water”, E. C. Pielou (Univ of Chicago, Chicago, 1998)

Desk Reference: St. Martin’s Handbook

Journal (required): The bookstore will have stocked a scientific “lab research notebook” of the type with “no carbon required” that automatically makes copies on numbered pages. This is the only acceptable form for your journal.

Reserve Material: The following journal articles and book chapters are included as required reading in the course. They are available on electronic reserve at the following URL: <http://www.bothell.washington.edu/library/reserve.html>

- Freire, Paulo, “The Banking Concept of Education”, an essay. pp 258-273.
- Miller, Char. “Running Dry: Water and Development in San Antonio.”, J. of the West, 44(3): 44-51 (2005).
- Esteller Maria V. and Diaz-Delgado, Carlos, “Environmental Effects of Aquifer Overexploitation: A Case Study in the Highlands of Mexico”, Env. Management 29(2): 266-278 (2002)
- Worster, Donald. "Flow of Power in History." in Ch 2 of Rivers of Empire: Water, Aridity, and the Growth of the American West. (Oxford, NY, 1985) pp. 19-21.
- Worster, Donald. "Total use for greater wealth." in Ch 6 of Rivers of Empire: Water, Aridity, and the Growth of the American West (Oxford, NY, 1985) pp. 262-85, 375-78.

- Wehr, Kevin, “Damnation: Controlling the Waters, Civilizing the Wilderness,” Ch 7 of *America’s Fight over Water: The Environmental and Political Effects of Large-Scale Water Systems*, (Routledge, NY, 2004) pp. 225-241.
- Marston, Ed “Reclaiming the Spirit of Reclamation,” *Nat. Res. Journal* (2004) 44:681-686
- Postel, Sandra L, Dailey Gretchen C, and Ehrlich Paul R, “Human Appropriation of Renewable Fresh Water”, *Science*, 271: 785-788.
- Leopold, Aldo. "The green lagoons." in *A Sand County Almanac and Sketches Here and There*. pp. 141-149.
- Brower, David R. "Let the river run through it." *Sierra*, 82(2): 42(3)
- Andrews ED and Pizzi Leslie A, “Origin of the Colorado River Experimental Flood in Grand Canyon”, *Hydrological Sciences Journal* , Aug 2000, 45(4): 607-627.
- Dalton, Rex “Floods Fail to Save Canyon Beaches”, *Nature* 438 (2005): p 10.
- Broder John M, “Closing of Mine on Tribal Lands Fuels Dispute over Air, Water, and Jobs”, *NY Times*, Jan 1, 2006, pg 1.12.
- Lifsher, Marc, “Indians Seek Funds from Edison; A coalition that includes Arizona Navajo and Hopi members seeks up to \$40 million a year in compensation after the closing of a power plant,” *Los Angeles Times*, Jan 12, 2006, pg C.1.
- Pimentel, David et al. "Water resources: agricultural and environmental issues." *BioScience*, 54(10): 909-918 (2004).
- Postel, Sandra L. "Water for food production: will there be enough in 2025?" *BioScience*, 48(8): 629-37 (1998).
- Brown, Lester R. and Halweil, Brian, “China’s Water Shortage Could Shake World Food Security”, *World-Watch*, Vol 11 (4), pp 10-21, July/August 1998.
- Amery Hussein A, “Water Wars in the Middle East: a looming threat”, *Geographical Journal*, 168: 313-323 (2002)
- Haddadin Munther J, “Water in the Middle East Peace Process”, *Geographical Journal*, 168: 324-340 (2002)
- Reisner, Marc. "Chpt. 2: The red queen." in *Cadillac Desert: the American West and its Disappearing Water*. pp. 52-103.
- Hurley Andrew “Aqueducts and Drains: A comparison of water imperialism and urban environmental change in Mexico City and Los Angeles”, *J. of the West*, 44: 12-21 (2005)
- Klinge, Matthew W, “Fluid Dynamics: Water, Power, and Reengineering of Seattle’s Duwamish River,” *J. of the West* 44: 22-29 (2005)
- Anonymous, “Lummi Water Agreement Negotiated,; *Seattle Times*, Jan 30, 1998, pg. B.2.

Course Description

This course is designed to introduce students to the Interdisciplinary Arts and Sciences (IAS) Program and to concepts of interdisciplinary knowledge more generally. It will be organized around the general theme of “water,” which will be addressed from scientific, environmental, political, social, and cultural perspectives. In their prior course work in mathematics, sciences, social sciences, and humanities, students should have begun to develop the fundamental quantitative and qualitative skills employed in academic writing, research, and critical thinking. In this course, students will further develop those skills as they investigate the nature and importance of water from multiple perspectives.

General Course Goals

The general goals of the course include: development of intellectual curiosity and excitement; development of an appreciation for the complex nature of difficult problems; and an introduction to UWB and the Interdisciplinary Arts and Science Program and development of skills necessary to succeed in it.

Specific Course Goals:

- An introduction to the science and natural history of water.
- An introduction to the interplay of culture, the environment, power, and politics with the US and World freshwater resources.
- An awareness of the implications of the limited fresh water resource to the future population growth of the world.
- Development of computer, library, reading, and writing skills necessary for student success at UWB.

Background (from reg guide)

Students are expected to have completed the first two years of an undergraduate degree with basic courses in mathematics, sciences, social sciences, and humanities. In their lower-division course work, the students should have mastered the fundamental quantitative and qualitative skills employed in academic writing, research, and critical thinking.

If you have not read graphs, or made use of the metric system, scientific notation, and/or your calculator in years, **do not panic!!** Some aspects of this basic material will be reviewed in class discussions and on web-based tutorials, and I am willing to spend time with you as individuals working on it during the first few weeks of the term.

Study Groups/Research Clusters. You will be divided by the instructor into small study groups of several students each. These groups will be the basis for discussions both in class and out of class, for group research activity, and peer writing groups. The group may also be called upon to make presentations in class.. *Much of this group interaction and peer review of your papers will be accomplished electronically.*

Writing Assignments. There will be four “formal” writing assignments and four shorter “informal” ones. An outline of these assignments is available. Details of them will be given out in separate handouts as each assignment is made. All assignments will be submitted electronically, and none will be accepted late.

Portfolios. You will assemble an electronic portfolio of all of your writing assignments and other artifacts you may wish to include. This portfolio will be a place for you to reflect upon your writing and learning during the course. The portfolio will be collected for feedback in the middle of the term and for final assessment at the end. *Preliminary submission April 25; final (graded) submission June 4, 2006.*

Class Participation, Homework and Workgroup Problems.

Significant class time will be spent in discussion and student presentation mode. Students or workgroups will be contributing to and leading discussions of the material we have read. Students will

be graded based on their participation in these class discussions. If you are missing from class, you cannot make up the participation grade.

There may be homework problem assignments given during the term. They may take the form of essay questions, quantitative problems, or abstracts of papers to be read. Some of these will be individual efforts, but others may involve a collaborative effort with your class partner.

The workgroups will be given problems to solve, write-up, and sometimes present in class. There will be several of these "Workgroup Exercises" during the course of the term. In some cases the groups will work on them during class time. Members of the workgroup who are not present for these exercises will receive no credit for them.

Journals. You are expected to keep a journal/notebook for this course. This journal must use the duplicate-page notebook specified above. Entries in the journal are to be dated and are to contain notes that you take on the readings for the course, during class, during group discussions, etc. From time to time, you may be asked to place specific assignments in your journal. On each Wednesday beginning with April 5 you are to tear out the duplicate pages from your notebook, staple them together, write your name on the first one, and hand them in to me. They will be graded for completeness and content. One of the main reasons for losing journal points will be failure to keep current with the readings assigned on the schedule; you are encouraged to read and make journal entries ahead of the schedule. In general, these journal entries are not to be rewritten or typed. Thoughtful, complete, and punctual entries will generally earn high journal grades. If you fill your first notebook, the bookstore will have additional ones. *Your journal will be available to you during the exams.*

If for some reason you miss a Wednesday class and fail to turn in your journal pages, you have two options: 1) send the journal pages to class with a classmate; or 2) Slip them under my door (UW2-312) before noon on the next day. *They will not be accepted via electronic transmission.*

Back-up Copies. You are responsible for maintaining back-up copies of all assignments. If an assignment should be lost or misplaced during the submission or grading process, it is your responsibility to provide a copy of that assignment upon request. Always maintain current backup copies of all of your work. Computer crashes do not qualify as "emergencies" in this class.

Exams. The two examinations will each be based upon approximately one-half of the course material, with special emphasis on the natural history material. The exams may be mixtures of quantitative problems, short answer questions and short essay questions. The exams are always to be completed in ink in standard examination books (green or blue books from the book store). Buy two exam books ahead of time, so that you do not have to waste your exam time going to the book store. Most exam and test questions will be graded primarily for content and your understanding of the concepts involved. Errors in grammar, spelling, etc., will influence these grades to the extent that they make it difficult to understand your reasoning and explanations. *A calculator may be needed for the*

exams. You should arrange to borrow one if you do not have one already. N.B.: You may refer to your Journals during the exams.

Classroom Rules. These basic rules, in addition to the requirements of the UWB Handbook, apply to the instructor and all students at all times in the classroom. If you cannot observe them at any time, you are expected to leave the classroom.

- No use of computers for web surfing, e-mail, or any other activities not directly related to class.
- No cell-phone calls, rings, musical interludes, etc., during class.
- All views are to be heard and engaged respectfully. As scholars, we are expected to analyze subject matter critically and express reasonable positions that are based on logic and fact rather than on emotion. **In no case are *ad hominem* arguments permitted in BIS 300.**

Attendance: Class & Exams. Any excuse for missing an exam *other than illness or family emergency* must be cleared with me at least one week ahead of time. If you cannot attend class on an exam day because of illness or emergency, you are expected **before class** to contact me by phone, leave a voice mail message, leave a message for me with the Interdisciplinary Arts and Sciences office, or leave me an e-mail message. Failure to notify me in one of these ways may result in you not receiving consideration for a make-up examination.

Regular class attendance is expected, although roll calls will not be generally taken. If you are not present to participate in class discussion, work group discussion and/or presentation of a “homework” exercise, that will, of course, profoundly affect your grade on that assignment. Missed in-class work (for whatever reason) *cannot* be made up.

Late Assignments. Assignments with due dates will not be accepted late, unless otherwise noted in the assignment instructions. If you are out of town on an assignment due date, it is your responsibility to arrange for internet access and submit the assignment electronically or to submit it before you leave.

Documented Disabilities

If you believe that you have a disability and would like academic accommodations, please contact Disability Support Services at 425.352.5307 or at rlundborg@uwb.edu. After an initial intake appointment, you should be prepared to provide documentation of your disability in order to receive assistance.

Academic Honesty

The highest standards of academic honesty will be expected in this class. Cheating and plagiarism in any of their forms are unacceptable. At the least, a grade of zero will be assigned to any work that is the product of cheating or plagiarism. Plagiarism is also discussed in the 1993-1995 UW Bothell Catalog:

"Plagiarism is the use of the creations, ideas or words of someone else without formally acknowledging the author or source through appropriate use of quotation marks, references, and the like. Plagiarizing is stealing someone's work and presenting it as one's own original work or thought. Student work in which plagiarism occurs will not ordinarily be accepted as satisfactory by the instructor, and may lead to disciplinary action against the student submitting it. Any student who is uncertain whether his or her use of the work of others constitutes plagiarism should consult the course instructor for guidance before formally submitting the course work involved."

Work that is assigned to you alone is to be assisted by no one else. When collaboration on homework is permitted, that fact will be made explicit. Assume that all assignments are to be individual work unless I indicate otherwise. The official UWB information on academic integrity is to be found at <http://www.uwb.edu/students/policies/integrity.html>. Each student is responsible to read and understand that information. *It is your responsibility to clarify with me any uncertainty that may exist on this question. Do not assume that an action is acceptable; ask me to be sure.*

Grades.

The final grade will be determined numerically by averaging your scores with the following weights:

Final Exam	10%	Informal Writing Assignments (4)	20%
Midterm Exam	5%	Writing/ Assignment #1	5%
Journal	5%	Writing Assignment #2	10%
Portfolio Assessment	5%	Writing Assignment #3	10%
		Writing Assignment #4	15%
		Workgroup assignments, homework, and class participation	15%

Most grades given during the course of the term will be based on a 100-pt scale. The **official decimal class grades** (0.0 - 4.0) will be determined from a weighted average of your individual grades. A weighted average of 96 will be assigned a decimal grade of 4.0, and a weighted grade of 55 will be assigned a decimal grade of 0.7. Intermediate grades will be determined by a linear relationship between these two limits. This scale represents a *minimum* decimal grade. If I judge it to be appropriate, I will give higher grades than those indicated by this scale. Based on experience, the class GPA will likely fall in the range 2.7-3.0 (a "B" average).

The following table represents the official UW conversion of standard letter grades to the UW decimal grade scale and the conversion to the 100-pt scale used in this class:

	A Range		B Range			C Range			D Range		
Letter	A	A-	B+	B	B-	C+	C	C-	D+	D	D-
Min Decimal	3.9	3.5	3.2	2.9	2.5	2.2	1.9	1.5	1.2	0.9	0.7
Min 100-pt	95	90	86	82	77	74	70	65	61	57	55

Library Materials:

There is a link on the course home page that connects to the library reserve catalog. Many useful reference materials are to be found in one of the UW libraries on the UWS campus rather than at UWB. These can be obtained with little effort via electronic document delivery or the courier service.

Make sure you know how to use this service.

The electronic reserve page for the course has articles that we will be reading during the course of the term. If you wish hard copies of these articles, you are responsible for printing them. There is a link to the E-Reserve on the course home page.

Use of E-Mail

You will be required to use e-mail as part of this course. Since our personal contact hours are quite limited, this will be a major avenue for our communication. In addition, I will use the class e-mail list, listserv, and web page as means of broadcasting information to the class. It is assumed that class members are reading their e-mail on a daily basis. You may, of course, read your e-mail anywhere of your choosing, but it is required that you will have an active account of the form UWNetID@u.washington.edu that you check or forward daily. You can set up your account from the UW Web page. There is also a link on our course home page that takes you to UW on-line documentation that explains how to set up an account, how to send e-mail, etc.

There is a web-based U-mail form set up that allows you to send me either identified or anonymous e-mail from the browser. It can be found at URL:

<https://catalysttools.washington.edu/tools/umail/form/?i=1852&o=jackels>

and there are links to this Umail form on the course home page.

Class Listproc

A listserv has been set up for the class. Any message or reply sent to this address is rebroadcast to the entire class. You are welcome to use this when you want to communicate with the entire class. Your UWNetID e-mail account is automatically subscribed to this listproc. The e-mail address for this is: bis300a_sp06@u.washington.edu

Note the single underscore between "bis300a" and "sp06"; it is required.

Use of Class Discussion Board

I have set up a computer discussion board for our use. This is an excellent medium for class discussions. Any class member can post to the bulletin board. It forms a "running" conversation that can be about the lectures, problem assignments, etc. I am using E-Post for this purpose. The bulletin board is found at:

<https://catalyst.washington.edu/webtools/epost/register.cgi?owner=jackels&id=15219>

A link to this bulleting board will appear on the course web site. When you first access this message board, you will establish a username and password. You can also click on "configure" in order to

select the type of e-mail notification to be provided. You can be automatically notified when someone has posted a message to the board.

Electronic Submission of Assignments

Most assignments for this course will be submitted electronically. The E-submit site for this purpose is found at:

<https://catalyst.washington.edu/webtools/secure/esubmit/turnin.cgi?owner=jackels&id=4241>

Peer Review Site

To assist in peer review of your papers and their preliminary submissions, a peer review site has been set up for the class. We will discuss in class how to use it. It is to be found at:

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Course Home Page

My personal home page is found at the URL:

<http://faculty.washington.edu/jackels>

Click on the entry referring to this course and you will find yourself at the course home page:

<http://faculty.washington.edu/jackels/bis300.s06/>

Chinatown. BIS300 goes to the movies! On May 31, we will be discussing the movie *Chinatown* in class. You will need to have viewed it before that date. It will be available for screening at the Media Center in the Library. It is also available at many video stores. If you have seen this movie in the past, you should plan on watching it again this term **after** you have read Reisner's chapter 2 (The Red Queen), which is on E-reserve for the course. As you view this movie, you should be taking notes in your journal. "Reading" and interpreting a film is not the same as "watching a movie." At UWB you will have the opportunity to study film with a number of faculty, who are experts in this medium. (I am not one of them!) Professor Goldberg has kindly provided a web page to assist students in learning to "[Read a Film.](#)" You should study this web page before your critical viewing of *Chinatown*:

<http://faculty.uwb.edu/mgoldberg/students/readafilm.htm>



Tentative Class Schedule (subject to change)

DATE	READING	TOPICS	Notes
Mar 27	Paper by Freire,	Course Intro; Video on water (BOT-970, pt 6, 30 m) Library Services Intro (brief)	Rob Estes (10:15) Distribute Writ Assg#1
Mar 29	D&J 1-2; Pielou 1-2	Ground Water; Writing Center Intro (brief)	Becky Rosenberg (10:15) Preliminary survey due Mar 31 Test submission due Mar 31
Apr 3	Pielou 3-4; D&J 10 & 14	Continuation (Ground Water)	
Apr 5	Paper by Miller Paper by Esteller and Diaz-Delgado	Continuation (Ground Water)	Distribute Writing Assg 2 and prelim assignment for Workshop I Writ Assg #1 due April 7.
Apr 10	Paper by Worster (from ch 2) Paper by Worster (from ch 6)	Rivers and Am West; Library Research Workshop I	Rob Estes Writing Center Appts in Week III
Apr 12	Pielou 5-6, 9	Cadillac Desert Video , (BOT-1324, Part II, 60 m)	Informal Response #1 due April 12.
Apr 17	Paper by Postel, Daily, and Ehrlich	Critical Reading Workshop (2 hrs)	Writ Assg #2 due April 18; Distribute Writ Assg #3 Becky Rosenberg and Cinnamon Hillyard
Apr 19	Paper by Wehr (ch7) Paper by Leopold; Paper by Brower; Paper by Andrews and Pizzi; Paper by Dalton, Essay by Marston Article by Broder Article by Lifsher	Environmentalism	Informal Response #2 due April 21
Apr 24		Library Research Workshop II (Scholarly sources and source evaluation, 2 hrs)	Rob Estes E-portfolio prelim submission April 25
Apr 26	Review	Exam 1(90 min); Intro to Res Question (30 min; 10:15)	distribute WA #4; Becky Rosenberg

May 1	Postel chs 1-5	Irrigation Miracle	
May 3	Paper by Postel Paper by Pimentel	Water Resources and Irrigation Workshop (1 hr): Research Question	Writ Assg #3 due May 5; Becky Rosenberg
May 8		Continuation	
May 10	Postel Ch 6; Paper by Brown and Halwiel	Agriculture vs Urban needs	Informal Response #3 due May 11
May 15	Postel Ch7 Paper by Haddadin Paper by Amery	Conflict	Writ Assg #4 prelim draft due May 16
May 17		Workshop: Revision (2 Hr)	Becky Rosenberg
May 22	Paper by Reisner., "Red Queen" D&J Chs 7 & 9; Paper by Hurley	Power, Politics, Urban Water	Informal Response #4 due May 23
May 24	D&J ch 3 Article from Seattle Times Paper by Klinge	Northwest Issues Place of Falling Waters video (BOT 1005);	
May 29		HOLIDAY	
May 31	View Chinatown(BOT-55) Study " Read a Film. "	Discussion of <i>Chinatown</i>	Writ Assg #4 due June 1 E-Portfolio due June 4
June 5	Review	Exam 2	