

California Water Resources

WATER UTILITY SCIENCE 107

Ticket Number: 54432

Thursdays January 26 to May 17

7:00-10:10 PM Room E-203—Preliminary Syllabus

Spring 2012

Course Description:

Study of California water history and laws including Los Angeles aqueduct system, Colorado River, State Water Project, Department of Interior, U.S. Army Corps of Engineers, Orange County and the southland water supplies, along with various conservation programs.

Student Outcomes: As a result of completing California Water Resources 107, students will be able to:

1. Accurately identify the three imported water sources into Southern California.
2. Identify the largest stakeholder groups of each imported water supply.

Course facilitator/professor: Dr. James Gates, (714) 628-4836

Office: SCC U-83, email: gates_jim@sccollege.edu Webpage:

www.sccollege.edu/water ; www.sccollege.edu/jgates (click on program video and KOCE Interview)

Required Text: Cadillac Desert, Marc Reisner. Available from college bookstore or from www.amazon.com for under \$14.00

Recommended Text: Water Sources, Principles and Practices of Water Supply Operations, 2nd edition AWWA

Recommended reading: The King of California (2003), Arax & Wartzman.

Recommended viewing CD's California's Water, volumes 1&2 produced by Huell Howzer for the Association of California Water Agencies (916) 441-4545, www.acwa.com

Dates: Week Topic:

Jan 26 1 **Student activity:** introduce your neighbor. **Lecture:** course overview, grading policy, internet accessibility, bibliographical references, text orders, student I.D. photo session dates, water source identification (online), *student project reports*, **Due May 12** (See explanation at the bottom). **Homework:** Obtain student I.D.'s, check-out the college library, logon and become a member of the bcwaternews.com

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- Feb 2 2** **Student activity:** Summarize a class handout provided in class.
Lecture: How to take effective class notes. Writing student project papers. Library and computer center tips, bcwaternews login, College completion certificates. MWDOC Powerpoint overview.
Homework: Read *Cadillac Desert's Sources Introduction* pages 1-14 (quiz on Feb 17)
- Feb 9 3** **Student activities:** Groups discuss various water sources in So. California. **Lecture:** Overview of Southern California water supplies: 4.4 plan, Law of the Colorado River allocations, Quantification Agreement Settlement, groundwater, Santa Ana River, Owens Valley, Colorado River, State Water Project, Central Arizona Project, Huell Howzer Video. **Homework:** Logon to NOAA – bring climate change information to class for discussion. Extra credit given to those who present their findings to the class.
- Feb 16 4** **Quiz #1** (Cadillac Desert Introduction and Howzer video highlights) **Lecture:** Hydrological cycle, 11-year Sunspot activity, SOHO, NOAA, Climate change issues, Owens Valley – city of Los Angeles, William Mulholland video.
Homework: Collect and *analyze* information about the Salton Sea. Submit a 1-2 page report due on Mar 3 with **your** views concerning the Salton Sea Issue. Summarize what you collect.
- Feb 23 5** **Student activities: (LA video highlight Quiz #2).** Group together to review notes made during last week. Extra credit given for presented summaries. Go to Owen's Valley committee link below:
http://www.inyowater.org/Water_Resources/Chronology_1900_2008.pdf
Lecture: Owens Valley and the City of LA, Cadillac Desert video
Homework: Research water quality differences between water sources
- Mar 1 6** **Student activities:** Discuss Salton Sea issues and water quality source differences. Water quality standards EPA and California Title 22, **Salton Sea report due.** **Lecture:** Current NOAA and SOHO data, Owens Valley, Mono Lake issues. Classic ways to save water. **Homework:** Think of HOW you can save water around your home. Personal ways to save. Submit at least 5 **personal** ways **YOU** can to conserve water and turn-in next week. (NO Copying from established lists!!!) Go to: www.mwdh2o.com and find-out how many directors are on the board.

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- Mar 8 7 **Student activities: Quiz #3: (Southern California water sources and hydrological cycle).** Discuss and **Turn-in Personal water conservation list.** **Lecture:** MWD Act and role for Southern California, Member agencies, Colorado river “Pecking order”, Cadillac Desert video.
Homework: Go to: www.acwa.com click on “about ACWA” and “ACWA Facts” and Delta vision.
- Mar 15 8 **Student activities: Quiz #4 (Delta Vision).** Student lecture note summaries in preparation for the Midterm. **Lecture:** State Water Project ownership, statistics and Delta Vision goals.
Turn-in Practice project paper with Summary, Analysis, Conclusion, and References. (See Notes on last page of syllabus).
Homework: Study notes and previous quizzes.
- Mar 22 **Spring Break --- Children’s Water Education Festival. Sign-up with agavin@ocwd.com for extra credit.**
- Mar 29 9 **No Class – Chavez Day**
- Apr 5 10 **Student activities:** Review for midterm, Delta vision and Cal Fed process conclusions. **Lecture:** CVP, Delta smelt, ESA, Huell Howzer video. Imperial Irrigation District and San Diego County Water Authority. Orange County population projections. State project statistics. Select your side: Farmer or Urban water interest. Collect notes for the side you select and get ready for a debate review. **Homework:** *Finish reading and writing Rivals in Crime papers; Review Project paper elements. What is a summary? What really should be in a conclusion?*
- Apr 12 11 **Student activities:** Review class topics. **Midterm Exam.**
Read: Chapter 6: Rivals in Crime (Cadillac Desert. Who are the rivals and what was the crime?). One-page brief due on Apr 21.
Homework: *Collect and analyze information concerning the California Coastal Commission. Turn-in one-page summary about the CCC next week*
- April 13 **Last day to drop class with a “W”. After this date the student may receive an “F” if attendance is not sufficient.**

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Apr 19	12	Student activities: 1. Coastal Commission discussion and paper due: 2. <i>Rivals in Crime Chap 6 papers due.</i> Lecture: Corp of Engineers discussion; Groundwater treatment rule, Cadiz, Arvin-Edison storage programs. Water ReUse Association, LADWP Toilet to Tap program. Real Conservation programs (multi-tiered). Quiz #5 (Salton Sea, Calif 4.4 plan, and State water project statistics). Role playing. Lecture: Santa Ana River projects, 1938 flood. Current Owens valley issues.
Apr 26	13	Finish library assignments and project paper. Turn-in the Topic “Description” of your Project paper. <i>Search www.ocwd.org for groundwater replenishment program information.</i> Extra credit
May 3	14	Blending formulas, Source Water quality variations, Extra credit papers due.
May 10	15	Project Papers Due. <i>Project Discussion for extra credit</i>
May 17	16	Final exam

Grading policy:

Project paper 100 pts (30%) Due May 22

Quizzes (5) 100 pts (30%)

#1 Feb 17 Cadillac Desert Introduction, 20-pts

#2 Feb 24 LA video highlights, 20 pts

#3 Mar 10 Calif. Water Sources, hydrologic cycle, 20-pts

#4 Mar 17 Delta visions, Howzer video highlights, 20-pts

#5 Apr 21 Salton sea, 4.4 plan, SWP stats, 20-pts

Homework papers: 30 pts (9%)

#1 Mar 3 -- Salton Sea – 10 points

#2 Mar 10 – Five Personal water conservation list –10pts

#3 Apr 21 -- Calif Coastal Commission – 10 points

#4 Apr 21 -- Rivals in Crime – 20 pts

#5 May 12 -- Project papers – 100 points

Midterm : Mar 31

Final: May 17 ..._

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- A = 90-100%
- B = 80-89%
- C = 65-79%
- D = 60-64%
- F = below 60%

All Water Utility Science students require a “C” or better to receive credit towards a completion certificate. A score of 64% or lower will require the student to potentially repeat the course.

Project paper: Due May 10. Submit at least a 5 to 7 page typed paper (12-point type) that describes a *water resource problem or issue*. Double-spacing is acceptable. Margins shall not exceed 1-inch on all sides. Paper should reflect what the student, 1. Investigated, 2. How information was collected, 3. The student’s **analysis** of the collected information.

For instance, you browsed the internet and found information concerning a water storage program and you emailed the utility for additional literature. They sent brochures and mentioned to you that they would be conducting tours at the site on a date you felt you could attend. You take pictures, notes, and collect additional handouts during the tour. Your paper should merely chronicle each of the events in a logical manner. EVERY paper shall have an executive **summary** about what you collected and analyzed (at the beginning of the paper) and a **conclusion** about what **you** learned. List all of your **references**.

1. Executive Summary = 20-points
2. Analysis of subject (Body) = 50-points
3. Your Conclusion = 20-points
4. References = 10-points

No credit will be given for handwritten submittals although attachments may contain handwritten information.

The hallmark of any class is regularly **attending** and performing **homework assignments**. Contact instructor during office hours or after class.

Communication between the instructor and student is essential for success. Additional assignments may be given to students who cannot avoid an absence due to work. The college policy is, if you miss three consecutive class sessions, the instructor may drop you. Students are reminded that career educational classes are regular college courses and are not seminars. As such, note taking is essential. If assistance is needed in how to take class notes, please notify instructor. Tests will be developed from text and class notes.

Cell phones: Please notify instructor at the beginning of class if you are on call at work. All others shall place phone on vibrate or off during class. iPods are not allowed in class. No phone calculators allowed.

Laptop computer use. Please obtain instructor's permission before class if you plan to turn a laptop on in class.

All college classes require that a student read assigned materials before class. For every hour in class, assignments are to cover 2-hours outside the class. A 3-unit course requires at least 6-hours of study outside of class.

It is advised that students gain extra credit by attending the Water Advisory Committee meetings (WACO) on the first Friday at 7:30AM of each month at the OCWD board room – Free continental breakfast.

Also advised that students become members of the AWWA local chapter. Go to www.ca-nv-awwa.org

Accommodations for Disabilities:

Students with verifiable disabilities who want to request academic accommodations are responsible for notifying their instructor and Disabled Students Programs and Service (DSPS) as early as possible in the semester. To arrange for accommodations, contact DSPS by phone (628-4860) or (714-639-9742 – TTY for deaf/hearing impaired) or stop by the DSPS center (E-105) newly located in the "E" building on the first floor.