COURSE SYLLABUS

COC Water Technology Certification/Associate’s Degree Program:

*Core Courses (Five Required)*
- WATER 020 – Introduction to Water Technology
- WATER 030 – Waterworks Mathematics
- WATER 031 – Advanced Waterworks Mathematics
- WATER 032 – Water Supply
- WATER 035 – Water Quality

*Advanced Courses (Two Required, Either)*
- WATER 040 Water Distr. I  OR  WATER 050 Water Treat. I  OR  WATER 060 Wastewater Treat. I
- AND
- WATER 041 Water Distr. II  AND  WATER 052 Water Treat. II  AND  WATER 061 Wastewater Treat. II

Course Description:
Examines advanced topics in conventional surface water treatment processes and disinfection, as well as non-conventional treatment processes. Assists in preparation for Grade T3 and T4 Water Treatment Plant Operator’s Certificate examination given by the State of California Department of Public Health.

Student Learning Outcome:
You will be able to determine the appropriate use and application of advanced water treatment technology to insure compliance with public health and safety regulations.

Course Objectives:

1. Analyze variations in conventional water treatment systems.
2. Assess and evaluate the performance and operation of various unit processes.
3. Examine normal and abnormal operating procedures including the application of laboratory results to process control, equipment, and facilities maintenance.
4. Appraise sources and calculate quantities of specific constituents in water and discuss how variations in these constituents affect treatment processes and water quality.
5. Create flow diagrams of typical treatment processes.
6. Compare and contrast federal and state laws and regulations as they relate to water treatment processes.
7. Examine current water industry issues and pending regulations pertinent to a water treatment plant.
8. Solve a wide range of calculations, including solving for unknowns relating to water treatment.

**Course Prerequisite:** None; WATER 050 is Recommended

**Class Information:**

- **Location:** This course is 100% Online!
- **Instructor:** Stephen J. McLean. P.E.
- **Phone No.:** 661-312-5463
- **e-mail:** stephen.mclean@canyons.edu
- **Web Site:** http://bb.canyons.edu

**Recommended Textbooks & Materials:**

- Water Treatment Plant Operation, Volume II, Sixth Edition
  California State University, Sacramento, School of Engineering
  Kenneth D. Kerri, Project Director
- Calculator

Also, some research and reading will be required on the Internet. Facilities for Internet access are available for free student use in the Library and the TLC on the Valencia and Canyon Country campuses at COC.

**Course Schedule:** See attached Course Schedule.

**Grading:**

Grade Elements:

- Weekly Quizzes (7 @ 20 points each) 140 points
- Weekly Assignments (8 @ 20 points each) 160 points
- Final Exam 100 points
- Total Possible 400 points
Minimum Points Required per Grade:

- A: 360 points
- B: 320 points
- C: 260 points
- D: 200 points

Finally, NO CHEATING! Please refer to the COC Statement on Academic Integrity and Plagiarism Approved by the Academic Senate in May, 2010, for our college’s expectations in this regard. For failing to live up to these standards in this course, you will be subject not only to complete forfeiture of the grade on the affected assignment, but also to disciplinary action by the college.

**Online Assignments and Expectations:**

You will be required to visit the Blackboard site for the course at least once each week. To do so, log on to: [http://bb.canyons.edu](http://bb.canyons.edu). If you are new to Blackboard, go to [www.canyons.edu](http://www.canyons.edu), click on the “Blackboard” tab, and click on “Blackboard Assistance” for information on how to access the site and accomplish everything you will need to do online.

Each week – usually at noon on Friday – you will see a new folder in Blackboard under the heading “Weekly Assignments” which will guide you through your course work for the week. These may include videos you need to watch, web sites you need to visit, textbook reading assignments, online discussions in which you need to participate, and even online quizzes you need to complete. But everything you need to accomplish online each week will be clearly identified in the Weekly Assignment folder in Blackboard.

The deadline for these weekly assignments is midnight on Sunday, meaning you will have a nine and one-half day time period – including two weekends – to complete each week’s work. This is why **absolutely no late assignments will be accepted**, unless you contact the Instructor in advance and have a very convincing reason for your tardiness (i.e., major illness in the immediate family, home destroyed by a natural disaster, etc.)

**IMPORTANT NOTE:** If you fail to complete two consecutive weekly assignments, you will be dropped from the class roster.

**Minimum Online Capabilities**

To successfully complete this course, you will need at least the following:

- Access to a computer with Internet access (Computers are available for student access in the COC library and the Tutoring Centers on each campus.)
- A very basic (beginner’s level) ability to “browse” among and within various web sites

If you have difficulty with these, please contact the Instructor or find “Student Support” help online at the COC Blackboard/Distance Learning site noted above.
Other Notes

Generally, with or without online activities, you should expect to spend about 18 hours during the week working on this course: your normal six hours of “classroom” time plus two hours outside of class for every hour normally in class, for an additional twelve hours.

Please be prepared: you may encounter “technical difficulties” along the way. If so, please keep trying and, if necessary, contact the Instructor. Technical difficulties do not constitute a natural disaster. As noted above, you should expect and plan on such difficulties. If one web site or browser doesn’t work, please try another. If your computer is lost or stolen, use the facilities on campus or the local public library.

Please contact the Instructor by e-mail if you have any questions during the week. I expect to be able to respond to you within 48 hours of your message.
All communication from the Instructor to you will be through your “canyons.edu” email account. Make sure that you check this frequently, in case of changes during the course!

One last thing: I hope you enjoy Water 052, and the online learning experience!