COLLEGE OF THE CANYONS
Water 050 – 11905
Water Treatment I
Fall Semester 2014

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:

Presents the basic operating principles and techniques of the conventional surface water treatment processes of coagulation, flocculation, sedimentation, and filtration,(212,546),(938,618) plus those of disinfection processes. Assists in preparation for Grade T1 and T2 Water Treatment Plant Operator’s Certificate examination given by the State of California Department of Public Health.

Student Learning Outcome:

The student will be able to determine the appropriate use and application of basic water treatment technology to ensure compliance with public health and safety regulations.

Course Objectives:

1. Identify the unit processes in conventional treatment and direct filtration plants.
2. Evaluate the multibarrier criteria and assess how it is used in a filtration plant to comply with the Surface Water Treatment Rule.
3. Interpret the main requirements of the Total Coliform Rule and the Surface Water Treatment Rule.
4. Compare and contrast the characteristics of ground water and surface water supplies, including chemical, physical and biological characteristics.
5. Solve basic mathematical calculations and conversions relating to area, volume, flow rate, velocity and chemical dosages.
Course Prerequisites:

It is recommended that students take Waterworks Mathematics (WATER 030) and Water Quality (WATER 035) before enrolling in this course.

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 1, 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:

<table>
<thead>
<tr>
<th>Grade Elements</th>
<th>Points</th>
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<tbody>
<tr>
<td>Weekly Quizzes (7 @ 20 points each)</td>
<td>140</td>
</tr>
<tr>
<td>Weekly Assignments (8 @ 20 points each)</td>
<td>160</td>
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<tr>
<td>Final Exam</td>
<td>100</td>
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<td>Total Possible</td>
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Minimum Points Required per Grade:

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<tr>
<th>Grade</th>
<th>Points</th>
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<tr>
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<td>B</td>
<td>320</td>
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<tr>
<td>C</td>
<td>260</td>
</tr>
<tr>
<td>D</td>
<td>200</td>
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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. If you are new to Blackboard, go to 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 050, and the online learning experience!