IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Spring 2025**	**Instructor Name:**	**Ricardo Arguellez**
Course Title & #:	**Computational Procedures Operator II/ WT 205**	**Email:**	**Ricardo.Arguellez@imperial.edu**
CRN #:	**21197**	**Webpage (optional):**	**www.imperial.edu**
Classroom:	**3117**	**Office #:**	**3111**
Class Dates:	**Feb. 10th – Jun. 6th**	**Office Hours:**	
Class Days:	**Monday**	**Office Phone #:**	**(760)355-5758**
Class Times:	**6:00PM-9:10PM**	**Emergency Contact:**	**Tisha Nelson Department Secretary (760)355-6361**
Units:	**3**	**Class Format:**	**Face to Face on Campus**

Course Description

This course provides instruction in entry-level to advanced-level mathematical calculations used in the operation and evaluation of conventional water/wastewater treatment processes and water distribution systems. Course will cover basic geometry, metric conversions, flows, pressure, and chemical dosage as it relates to the water/wastewater industry. Material will parallel some of the problems found on State Certification examinations. (CSU

Course Prerequisite(s) and/or Corequisite(s)

Recommended Preparation WT 105

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Apply mathematical principles to address and solve problems related to water and wastewater treatment technologies.
2. Enhance treatment systems by interpretation of hydraulic volumes, dimensional analysis, primary and secondary sewage treatment, calculations and chemical dose rates as it relates to water/wastewater technology.
3. Understand and evaluate issues concerning the proper use and distribution of the water natural resources.
4. Effectively attain grades III/IV/V in both water and wastewater State certifications.

Course Objectives

Upon successful completion of this course, the students will:

1. Demonstrate knowledge of volume calculations.
2. Demonstrate knowledge of flow and velocity.
3. Demonstrate the ability to calculate milligrams per liter to pounds per day.
4. Demonstrate the ability to calculate loading rates.
5. Demonstrate the ability to calculate detention and retention times.

6. Demonstrate the ability to calculate efficiency and percentages.
7. Demonstrate knowledge of pumping calculations.
8. Demonstrate knowledge of source and storage volumes.
9. Demonstrate knowledge of coagulation and flocculation rates.
10. Demonstrate the ability to calculate sedimentation times.
11. Demonstrate the ability to calculate filtration rates.
12. Demonstrate the ability to calculate chlorination rates.
13. Demonstrate the ability to calculate flouridation rates.
14. Demonstrate the ability to calculate softening rates.
15. Demonstrate knowledge of laboratory calculations.

Textbooks & Other Resources or Links

Applied Math for Water Plant Operators (Recommended Only)
By Joanne Kirkpatrick Price. CRC Press.
ISBN: 13-978-0877628743
https://www.amazon.com/Applied-Math-Water-Plant-Operators/dp/0877628742

Course Requirements and Instructional Methods

This is a Face-to-Face college format class; the student is required to physically attend class on college as scheduled it. Specific instructions and assignments will be available only through Zoom and Canvas.

Required materials: Any device able to work with CANVAS (laptop preferably), notebook, pen and pencil with eraser, calculator with at least 9 digits capability (not programmable), solar power recommended. Cell phones will not be allowed as a calculator. No red ink pens or pencils.

Assignments: Will be made in class or homework and will not be accepted late. All class activities will be described in advance on weekly basis at Modules on your Canvas class home page during the semester.

Prerequisite(s): None

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out of class time per week over the span of a semester. WASC has adopted a similar requirement.

CANVAS

Access to Canvas is important as most of the class content will be located on your IVC Canvas site. You need to login into Canvas Student Login and then go into the course. You can also use CANVAS to email your fellow students or myself. The Canvas Student Guides Site provides a variety of support available to students 24 hours per day. Additionally, a 24/7 Canvas Support Hotline is available for students to use: 877 893-9853.
You may also chat with someone live about your issue at:
https://cases.canvaslms.com/liveagentchat?chattype=student&sfid=001A000000YzURSIA3
If you need additional training using Canvas you can go here:
https://training-portal-prod-pdx.insproserv.net/pages/tutorial

Here it is an overview from the course key areas, each one can be accessed from the course menu:
Home Page will be the starting point of the class and will give you as well a general overview from class activities and notifications during the semester.

- Announcements will be made every week letting you know about next week's class schedule and activities.
- Syllabus contains information that you will use throughout the course: Syllabus and Schedule.

• Modules contain everything you need for each week of the course. Simply click on "next" to move forward from one item to the next one into the week's module.
• Quizzes provide one-click access to weekly quizzes and occasional surveys.
• Tests provide one-click access to chapter exams.
• Grades list your scores and the points possible for all assignments. Most quiz grades are posted immediately after completion. You will also see your current total points and percentage.

Course Grading Based on Course Objectives

Exam grade scale is strictly based on score percentage. No partial credit will be given for math. All work must be shown for credit. You are strongly advised to be present for all quizzes and exams. Make up test, unless due to special circumstances, will not be granted.

Asking to make-up missed quizzes or exams is your responsibility and needs to be for a reasonable excuse. Exams may include true/false and multiple-choice questions (math included).

Grade scale is as follows:

A= 90%-100% **Excellent**

B= 80%-89% **Good**

C= 70%-79% **Satisfactory**

D= 60%-69% **Pass, less than satisfactory**

F= 59% & Below **Failing**

Final grade shall consist of:

Attendance	***100 points***
Class Participation	***100 points***
Chapter Quizzes & Exams	***200 points***
Final Exam	***100 points***
Total Points Possible	***500 Points***

Course Policies

Attendance, Late Assignments: Absences and tardiness provide an opportunity to miss valuable instruction presented by the instructor, guest speakers, and site administrators. Tardiness will contribute to lower scores on assignments and subsequently a lower course grade. All assignments are due on the specified completion dates and all students have the same and equal time to complete all assignments as per the course calendar. Considerations will be given to those late assignments accompanied by a written medical statement from a physician. 25% of possible points will be penalized for late work. Any assignment can be turned in prior to the due date!

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed 3 class meetings consecutively or not may be dropped from the course.

- Students who stop attending class are responsible for dropping themselves, Students who fail to drop the course after the drop deadline will receive a failing grade.
- Deadline to drop with a "W" 13 May 2025
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences. Required Information --Discretionary language This is where an instructor explains his/her policy on these matters. Here is some suggested language:
- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor. Consider: specifics for your class/program.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children. · Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to 'cite a source' correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.
- Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Other Course Information

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities, please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

[Provide a tentative overview of the readings, assignments, tests, and/or other activities for the duration of the course. A table format as in the example below may be used for this purpose.]

Date or Week	Activity, Assignment, and/or Topic	Assignment
Week 1	**Introduction and course overview**	Textbook, laptop & calculator

Date or Week	Activity, Assignment, and/or Topic	Assignment
Week 2	**No Classes Campus Closed**	**Presidents' Day February 17**
Week 3	**Area - Volume - Circumference**	Class Practice & Quiz
Week 4	**Flow- Velocity- Pressure**	Class Practice & Quiz
Week 5	**Milligrams per liter to lbs/day**	Class Practice & Quiz
Week 6	**Review Chapters 1 - 2 - 3**	Exam Chapters: 1 - 2 - 3
Week 7	**Loading Rates**	Class Practice & Quiz
Week 8	**Detention Time**	Class Practice & Quiz
Week 9	**Review Chapters 4 - 5**	Exam Chapters: 4 - 5
Week 10	**Total Dynamic Head**	Class Practice & Quiz
Week 11	**No Classes Campus Closed**	**Spring Recess April 20-26 No Classes**
Week 12	**Horsepower & Pumping**	Class Practice & Quiz
Week 13	**Power Consumption**	Class Practice & Quiz
Week 14	**Review Chapters 6 - 7 - 8**	Exam Chapters: 6 - 7 - 8
Week 15	**Chlorination**	Class Practice & Quiz
Week 16	**No Classes Campus Closed**	**Memorial Day May 26**
Week 17	**Final Examination**	**Final**

Holidays

February 14st Lincoln Day Observed No Class

February 17st Washington Day Observed No Class

April 20st- 26th Spring Recess No Class

May 26th Memorial Day Observed No Class

*****Subject to change without prior notice*****