



ROMBLON STATE UNIVERSITY
College of Engineering and Technology
Department of Civil Engineering



COURSE OUTLINE

CE315 - HYDROLOGY 1st Semester SY 2020-2021

RSU VISION

Romblon State University as a premier institution of higher education in the MIMAROPA region for a globally competitive Province of Romblon.

RSU MISSION

The Romblon State University is committed to: (1) provide advanced education, higher technological and professional instruction; (2) provide training in agriculture and fishery, for science and technology, education, arts, agriculture, and other relevant fields of study; (3) undertake research and extension services; and (4) provide progressive leadership in its areas of specialization.

COURSE DESCRIPTION

This course deals on the hydrologic cycle and its processes such as precipitation, evaporation, infiltration, overland flow, groundwater flow and surface runoff generation. The course also covers classification of surface waters beneficial uses, weather instruments, water quality standards and review of environmental laws and regulations in relation to water use and quality, including water resource and watershed management.

COURSE CONTENT AND TOPICS

- (1) Basic Background on Hydrology, Hydrologic Cycle and its Processes
- (2) Importance and Utilization of Water
- (3) Classification of Surface Water and Beneficial Use
- (4) Climatic Conditions in the Philippines and Weather Instruments and Parameters
- (5) Properties of Water and Water Quality Standards and Analysis
- (6) Review of Relevant Environmental Laws and Regulations on Water Use and Quality
- (7) Water Demand, Design Criteria, Water Consumption Calculations, Water Balance Equation
- (8) Precipitation: Formation of Precipitations, Classes/Forms of Precipitations; Rainfall Analysis and Calculations and Rain gauge Measurements
- (9) Evaporation and Evapotranspiration, Evaporation Measurements and Techniques and Estimation of Evaporation
- (10) Infiltration/Storage – A Process, Methods of Measurement and Analysis, Groundwater and Basic Terms, and Water Table and Aquifer
- (11) Runoff Mechanism - Methods of Measurement and Analysis, Hydrograph, and Floods
- (12) Hydrological Design (Reservoir and Dam), Water Resource Management and Watershed Management

COURSE REQUIREMENTS

1. Online Attendance/Login
2. Online Class participation thru Discussion Forum
3. Online Homework/Assignments
4. Online Quizzes/Major Examination
5. Progress Reports via Google Meet



6. Group Work Final via Google Meet

COURSE POLICIES

- ✓ Online login/participation is necessary for each student to obtain maximum benefits for instruction. It is expected that the students regularly visit the websites (Weebly, Google Classroom, ARAL; and Canvas or Moodle are optional platforms); and active participation in the online discussion/forums will be monitored regularly. Observe p
- ✓ Proper online etiquette (politeness) in posting messages in the discussion forums.
- ✓ Projects and online homework/assignments must be submitted on time. Point deduction will apply to late submission of individual projects and homework/assignments.
- ✓ Online quizzes will be given on a specified time and to be announced ahead of time. Make-up online quizzes will be given only for those who have valid reasons of missing the quizzes/examinations.
- ✓ Online major examinations (Mid-term and Final) are optional and to be announced ahead of time. Make-up online examinations will be given depending on the availability of the students. It might be given on-site or face-face provided that necessary arrangements will be made.
- ✓ **Students are required to have a notebook for the subject.** It is expected that all students will take notes during class and will study these notes. Handouts should be downloaded or photocopied. Assignments will be handwritten in the notebook and images/photos of these assignments will be submitted electronically via Google Classroom or ARAL system.
- ✓ No sharing of homework/assignments electronically or any means of copying others outputs.
- ✓ Personal laptops, cell phones and other electronic gadgets are strongly encouraged to use for the online learning. Visit to computer shops are still acceptable but maintain social distancing and wearing ng face masks/shields.
- ✓ Face-to-face group studying and peer teaching are also encouraged to enhance the knowledge and skills but proper protocols such as social distancing and wearing of face masks and shields will be strictly observed.
- ✓ Any form of online cheating will not be tolerated. Any violation will be dealt properly.
- ✓ **Plagiarism is not tolerated in the preparation of written reports, thus proper citation and referencing are necessary.**

STUDENTS WITH SPECIAL NEEDS

Students who have any disability that might affect their performance in the class are encouraged to speak with the instructor early in the semester.

COURSE GRADING SYSTEM

Grading will be as follows:

Online Attendance/Class Participation	20%
Homework/Assignment	10%
Quiz	5%
Group Work/Output	40%
Midterm and Final Examinations	25%



Methods of Computation

Absolute zero shall be used in all examinations and quizzes.

Percentile shall be used in recording grades when evaluating students using the formula below.

$$Final\ Grade = \frac{Midterm\ Grade + Final\ Term\ Grade}{2}$$

Grades Equivalent

Rating	Grade
96 - 100	1.00
91 - 95	1.25
86 - 90	1.50
81 - 85	1.75
76 - 80	2.00
71 - 75	2.25
66 - 70	2.50
61 - 65	2.75
60	3.00
Conditional	4.00
Below 60	5.00

CONDITIONAL is not a grade. It is given to students that lacks necessary requirements and therefore, must be accomplished before the end of that semester to obtain a grade. INCOMPLETE (INC) is reflected in the university online grading/report system as a mark given to the students for major compliance in the subjects which requires a Completion Form from the Registrar to be filled-up and accomplished within a year, otherwise noncompliance is a final grade of 5.0. WITHDRAW (W) is also reflected in the grading/report to indicate that the student withdraw or did not finish/complete the subject enrolled.

READING MATERIALS

Brutsaert, W. (2005). *Hydrology An Introduction*, UK: University Press, Cambridge.

Davie, T. and Quinn, N.W. (2019). *Fundamentals of Hydrology*, New York: Routledge.

Davie, T. (2008). *Fundamentals of Hydrology*, Taylor & Francis e-Library.

Davis, M. L. And Masten, S.J. (2004). *Principles of Environmental Engineering and Science*, International Edition, New York: McGraw-Hill Education (Asia).

Eslamian, S. (2014). *Handbook of Engineering Hydrology, Environmental Hydrology and Water Management*, UK: Taylor & Francis Group, LLC.

Han, Dawei (2010). *Concise Hydrology*, Dawei Han and Ventus Publishing APS, Retrieved from www.bookboon.com.

Henry, J.G. and Heinke, G.W. (2000). *Environmental Science and Engineering*, Singapore: Pearson Education Asia Pte., Ltd., Singapore.

Raghunath, H.M. (2006). *Hydrology: Principles, Analysis, Design*, Revised Second Edition, New Delhi, India: New Age International (P) Limited, Publishers.



Mihelcic, J.R. and Zimmerman, J.B. (2010). *Environmental Engineering Fundamentals, Sustainability, Design*, Singapore: John Wiley & Sons Singapore Pte, Ltd.

Shaw, E.M. (2005). *Hydrology in Practice*, Third Edition, UK: Taylor & Francis or Routledge, www.ebookstore.tandf.co.uk.

Speight, J.G. and Lee S. (2000). *Environmental Technology Handbook*, 2nd Edition, USA: Taylor & Francis, USA.

Subramanya, K. (2008). *Engineering Hydrology*, 3rd Edition, New Delhi: Tata McGraw-Hill Publishing Company Limited.

Schwab, G., Fangmeier, D., Elliot, W., Frevert, R. (1993). *Soil and Water Conservation Engineering*, 4th Edition, Quezon City: JMC Press, Inc.

The World Bank Office Manila (2012). *Rural Water Supply Design Manual, Volumes 1-3*, Water Partnership Program, Manila, Philippines: World Bank.

Vesilind P.A, Morgan, S.M., and Heine, L.G. (2013). *Introduction to Environmental Engineering*, 1st Philippine reprint, Singapore: Cengage Learning Asia Pte Ltd.

ONLINE LEARNING PLATFORMS:

www.rsucivilengineering.weebly.com

<https://classroom.google.com/u/3/c/MTU1Njc3MTkwMzI4>

Google Classroom Code: a7iu471

www.aral.cloud.8000/

<https://rsu2020.moodlecloud.com/>

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