



**MIDDLE EAST TECHNICAL UNIVERSITY NORTHERN CYPRUS CAMPUS
CIVIL ENGINEERING PROGRAM**

**CVE-376 (3-0)3 ENGINEERING HYDROLOGY
2011-12 Spring**

SYLLABUS

Instructor:

Name: Assist. Prof. Dr. Bertuğ Akıntuğ
Office: R-206
Phone: +90(392) 661 2924
email: bertug@metu.edu.tr

Course Schedule:

Wednesday 10:40 – 11:30
Friday 10:40 – 12:30

Office Hours:

Wednesday 9:40 – 10:30, 11:40-12:30
Thursday 14:40 – 15:30
Friday 9:40 – 10:30, 15:40-16:30

Main Text:

- Usul, N., Engineering Hydrology, 2nd Edition, METU Press, Ankara, Turkey, 2005.

Auxiliary Texts:

- Brutsaert, Wilfried. Hydrology: An Introduction, Cambridge University Press, Cambridge, New York, 2005 (GB661.2 .B78 2005).
- Chow, V. T., Maidment, D. R., Mays, L. W., Applied Hydrology, McGraw-Hill International Editions, 1988 (GB 661.2 .C43 1988).
- Patra, K. C., Hydrology and Water Resources Engineering, Alpha Science International, Oxford, UK, 2008 (GB661.2 .P38 2008).
- Wurbs, R. A., and James, W. P., Water Resources Engineering, Prentice Hall, 2002 (TC145 .W87 2002).
- Chin, D. A., Water Resources Engineering, Prentice Hall, 2006 (TC145 .C52 2006).
- Ward, R. C., Principles of Hydrology, McGraw-Hill, 2000 (GB661.2 .W35 2000).

Grading:

First Mid-Term Exam	: 20%
Second Mid-Term Exam	: 20%
Final Exam	: 40%
Homework	: 15%
Attendance	: 5%

Catalog Content:

Hydrologic analysis in water resources: Precipitation, streamflow and hydrograph analysis. Hydrologic flood routing. Statistical analysis in water resources. Groundwater hydrology. Engineering applications.

(Available at http://www.ncc.metu.edu.tr/academic/Academic_Catalog.pdf)

Course Objectives:

The over all objective of the course is to teach students the basic concepts of hydrology through a combination of classroom discussions, tutorials, and computer applications. Upon completion of this course, students will be able to

- describe the main processes of the hydrologic cycle,
- estimate hydrologic design of hydraulic structures, and
- calculate basics of groundwater hydrology.

Course Outline:

- Introduction (Chapter 1)
- Precipitation (Chapter 3)
- Streamflow (Chapter 4)
- Basin (Chapter 6)
- Hydrograph Analysis (Chapter 7)
- Flood Routing (Chapter 8)
- Statistical Methods in Hydrology (Chapter 9)
- Hydrologic Design of a Hydraulic Structure (Chapter 11)
- Groundwater Hydrology (Chapter 12)

Course Web Site:

Relevant course materials such as lecture presentations and assignments and announcements will be posted in the web site of the course. Please check the web site <http://www.metu.edu.tr/~bertug> regularly.

Attendance:

Minimum 60% attendance is mandatory. If your attendance is below 60% at the end of the classes, you will be graded as **NA**.

Participation in lectures is part of the overall grading (5%). The attendance will be taken at the end of each lecture hour by instructor. During the term there will be 42 lectures. The allocation of 5% will be as follows: Attending between 25-27 lectures: 1%, 28-30 lectures: 2%, 31-33 lectures: 3%, 34-36 lectures: 4%, 37-42 lectures: 5%. Note that this point system is designed to encourage participation in the lectures.

Assignments:

Home assignments must be solved **individually**. You are welcome to discuss problems with instructor. It is also acceptable to ask advice from a fellow student. However, home assignments should not be solved in groups. Direct copying of a fellow student's solution will be considered as cheating and will be treated accordingly. Your assignments should represent **your** efforts, not that of another person.

Late Policy: Late assignments will **NOT** be accepted.

Important Note:

The following parts of the text book **will not be covered** in the course content.

Chapter 1: 1.6

Chapter 2: Completely

Chapter 3: 3.1, 3.2.3, 3.2.4, 3.2.5, 3.2.6, 3.3.1, 3.3.2, 3.3.4, 3.6

Chapter 4: 4.3.2, 4.3.3, 4.3.4, 4.5

Chapter 5: Completely

Chapter 6: 6.4, 6.7.2.1, 6.7.3

Chapter 7: 7.4.2

Chapter 10: Completely

Chapter 12: 12.5

Computer Usage:

MS Excel.

A Note on Cheating, Deception, and Plagiarism:

Academic code of ethics defines cheating, deception, and plagiarism. You can reach these definitions through <http://www.ncc.metu.edu.tr/academic/acadcode-of-ethics.php>

Please aware that violations of the academic code of ethics may result in disciplinary actions, ranging between a “Warning” and “Dismissal from the University”.