NEAREAST UNIVERSITY

Faculty of Engineering, Department of Civil Engineering

CE 471 Water resources Engineering I

***CE 471 Water Resources Engineering II 4 credits***

*The occurrence, sources, distribution and movement of groundwater. Aquifer types, differential equations of confined and unconfined aquifers. Well hydraulics. Graphical analysis, numerical and experimental solution of ground water flow. Water transmission by pipelines, hydraulics and operation of pumped discharge lines and gravity pipelines, design of pipelines and design of water distribution systems.Prerequisite: CE 372*

Lecturer : Prof. Dr. İbrahim Gürer Teaching Asst: ………………………...

2015-2016 Autumn Spring (I Term) Lectures' Program (\*) (Draft)

Subject Date

The occurrence, sources, distribution and movement of groundwater 02.10.2015

Aquifer types, differential equations of confined and unconfined aquifers 03.10.2015

Numerical Examples on Aquifer characteristics, movement of GW 16.10.2015

Well hydraulics 17.10.2015

Well hydraulics (Numerical Examples) 30.10.2015

Graphical analysis, numerical and experimental solution of GW 31.10.2015

Midterm Exam(\*\*) 13.11.2015

Water Supply Objectives and System Components 14.11.2015

Water transmission by pipeline 27.11.2015

Hydraulics and operation of pumped discharge lines and gravity pipelines, 28.11.2015

Design of pipelines 11.12.2015

Design examples of pipelines 12.12.2015

Design of water distribution systems , numerical examples 25.12.2015

Repeat 26.12.2015

Final Exam (\*\*) **…………...**

**REFERENCES**

Altınbilek, D., Yanmaz,M., Warter Resources Engimeering Class Notes, METU 1988 Ankara

Erkek,C., Ağıralioğlu, N., SUKAYNAKLARI MÜHENDİSLİĞİ, Beta Basım. A.Ş. 2005 İstanbul

Gürer, İ., NEU CE 471 Water Resources Lecture Notes , 2013 and 2014 Lefkoşe

Usul, N. Hydrology for Engineers, METU Press 2006, Ankara

Usul , N. Mühendislik Hidrolojisi, METU Press, 2012, Ankara

Yanmaz, M., APPLIED WATERRESOURCES ENGINEERING, METU Press,2014 Ankara

**GRADING**

There will be 1 Midterm, 5 pop-up quizzes and Final examination in this course. Attendance is encouraged. Course grade will be computed as:

**Course grade = Midterm %30 + Quizzes and Attendance %10 + Final %60**

(\*) CE471 (English) and TCE 471 (Turkish) lectures will run parallel. Please Follow both lecture notes and solved examples

(\*\*) Exact Dates of Midterm and Final exams are determined by Department.