

COURSE SYLLABUS AND OUTLINE
FIP 230 - Hydraulics and Water Distribution Systems
WINTER QUARTER, 1987 - 1988

INSTRUCTOR

Elmer J. Padgett
Office: T121 Phone: 455-1221, ext. 264

COURSE HOURS

Class: 3 Lab: 2 Credits: 4

TEXTBOOK

HYDRAULICS FOR FIRE PROTECTION by HARRY E. HICKEY

COURSE DESCRIPTION

A study of the mechanics and flow of fluids through fire hose, nozzles, and applicants, pumps, standpipes, watermains, sprinkler systems, and other devices.

ATTENDANCE POLICY AND GRADING POLICY

As per your college catalog.

COURSE OBJECTIVES

1. To present the fundamental concepts needed to solve a boad range of the Fire Protection Hydraulic problems.
2. To present a learning environment that will stimulate student interest in Fire Protection Hydraulics.
3. Utilize formulas and graphs to determine fire flows.
4. Determine advantages of grid and loop water distribution systems in relation to deadend systems.

COURSE SYLLABUS

DECEMBER

2, 3, 7, 8, 9, 10: THE CHARACTERISTICS AND BEHAVIOR OF FLUIDS

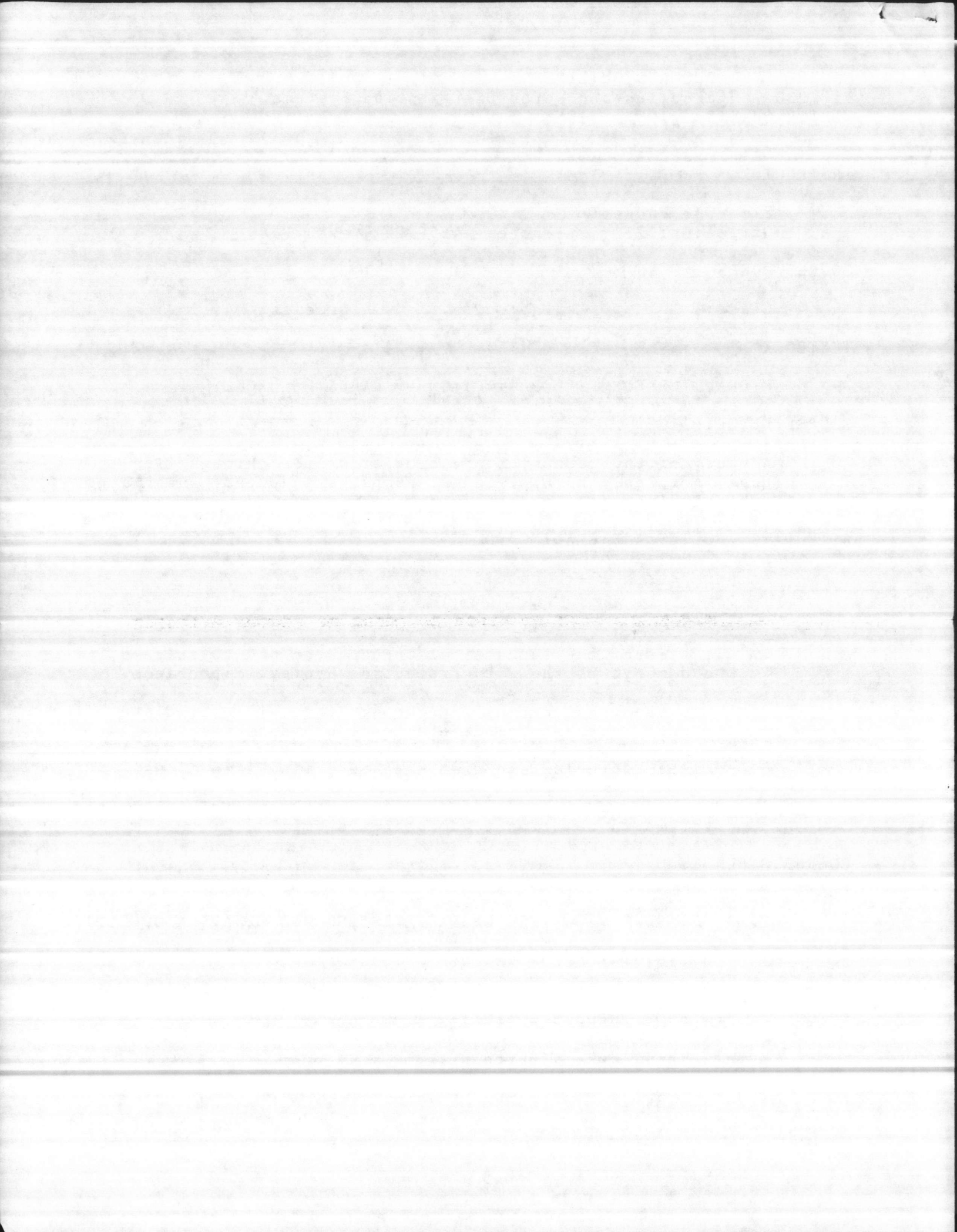
14, 15, 16, 17: FLOW THROUGH ORIFICES

JANUARY

4, 5: FLOW THROUGH CONDUIT

6, 7: TEST, ENERGY PRESSURE FROM FIRE PUMPS

11, 12, 13, 14: PRESSURE AND FLOW INSTRUMENTATION



JANUARY (continued)

18, 19, 20, 21, 25, 26: SUPPRESSION EQUIPMENT DISCHARGE ANALYSIS

27, 28: ENERGY CALCULATIONS FOR FIRE STREAMS

FEBRUARY

1, 2, 3, 4: TEST, ENERGY CALCULATIONS FOR FIRE STREAMS

8, 9, 10, 11: FIELD TRIPS FOR LAB PROJECTS

15, 16, 17, 18: SPECIAL TECHNIQUES FOR HYDRAULICS ANALYSIS; PRESENTATIONS OF PROJECTS

22, 23: REVIEW

24, 25: FINAL EXAMS

ASSIGNMENTS

1. Questions/problems at end of each chapter will be due one week after the completion of the chapter. Show all work on computational problems.
- w. Two tests will be given as shown on course syllabus. The tests will consist of true/false, multiple choice, short answer, problem solving, and essay questions.
3. Group project topics will be determined by each group with approval of the instructor. Project proposal must be handed in, IN WRITING, as shown on course syllabus. Due date for final project report is also on course syllabus.
4. Each student will complete two abstracts of articles concerning the topic of hydraulics. Refer to handout for abstract form. Due dates are shown on course syllabus.

