

NUMBER AND TITLE OF COURSE:

ARC 5689, Environmental Technology, 3 Credit Hours

Course Description:

Comprehensive review of mechanical, electrical, and plumbing systems for buildings. Energy utilization, heating and cooling, water delivery and waste removal, fire protection, illumination, transportation systems, and acoustics.

Course Goals and Objectives:

Environmental Technology will focus upon the active and non-active mechanical and electrical systems commonly found in today's buildings. Major topics include plumbing, roof drainage, fire protection, power, lighting, transportation, acoustics, heating, ventilating and air conditioning.

Examinations will cover all reading and lecture materials. Questions will be true/false, multiple choice, or fill in the blank and may involve problems requiring simple calculations and graphic interpretations.

Part 1- Plumbing/Fire Protection

Exam No. 1 – 20%

Part 2- Power & Lighting

Exam No. 2 – 20%

Part 3- Transportation & Acoustics

Exam No. 3 – 20%

Part 4- HVAC

Exam No. 4 – 20%

Homework/Attendance – 20%

Student Performance criterion/ addressed:Understanding:

B.3, Codes and Regulations; B.6, Environmental Systems; B.9, Building Service Systems;

C.1, Research; C.2, Integrated Evaluations and Decision Making-Design Process; C.3, Integrated Design

Prerequisites:

PR: Physics, ARC 5470 – Intro to Technology

Textbooks/Learning Resources:

Required Text: Mechanical and Electrical Equipment for Buildings, 11th Edition by Grondzik, Kwok, Stein and Reynolds.

Offered (semester and year):

Spring term only

Faculty Assigned:

John J. McKenna (adjunct)