

system demand and design.

Identify the elements and the purpose of a separate drainage piping system within a building and define the purpose of venting to the atmosphere and fresh air ventilation on human comfort.

Understand principles of Watts and Ohm's laws define the behavior of electrical circuits.

Explain how electrical power is generated and conducted.

Describe the different types of electrical services, compute building service loads, describe the use of electrical panels, disconnect switches and circuit breakers.

Identify the requirements for low power systems such as building controls, communication, fire alarm and TV.

Examine different type

fields. Students will be given two weeks to complete the projects.

Exams: There will be three exams each worth 150 points. They will be "open book". There will be true/false questions, multiple-choice questions and story problems. Questions will

SCHEDULE OF TOPICS

CM F142 Mechanical & Electrical Technology

Instructor: Mark Frame, P.E.

Jan 23 – May 01, 2017
Mondays 6:00pm – 9:00pm

Class 01 Jan 23

Introduction: Class Schedule & Syllabus
Browse text: Mechanical and Electrical Systems in Buildings (5th edition) by Janis & Tao

Class 02 Jan30

Topic: Intro to Mech & Elec Systems and HVAC Fundamentals
Reading: Chapters 1 & 2

Class 03 Feb 06

Topic: HVAC Delivery and Cooling Systems
Reading: Chapter 3 & 4

Class 04 Feb 13

Topic: Heating and Air Handling Systems
Reading: Chapters 5 & 6

Class 05 Feb 20

Topic: Piping & Plumbing Eq. & Systems
Reading: Chapters 7 & 8
Exam #1 Study Review

Class 06 Feb 27

Exam #1

Class 07 Mar 06

Topic: Fire Protection
Reading: Chapter 9

Mar 13 Spring Break, no class

Class 08 Mar 20

Topic: Intro to Electricity
Reading: Chapter 10

Class 09 Mar 27

Topic: Power Equipment & Systems
Reading: Chapter 11
Project 1 due

Class 10 Apr 03

Topic: Communication, Safety, Security Systems and Electrical Design
Reading: Chapters 12 & 13
Exam #2 Study Review

Class 11 Apr 10

Exam #2

Class 12 Apr 17

Topic: Light, Lighting Equip & Systems,

