New York University Polytechnic School of Engineering
Department of Civil and Urban Engineering
Course Outline CE 3535 Non-Structural Building Systems
Spring 2017
Course Director: Lawrence Chiarelli
Instructors: William Rodwick & Fred Tamayo
January 24-Tuesday Time: 4:30 PM to 7:30PM; RH 505 Class: 1650A

To contact instructors:
William Rodwick PE, MPA; Phone: 914 434 4860
Fred Tamayo, PE: ft25@nyu.edu; Phone: 646 574 7377
Please call between 7:00 PM and 10:00 PM

Course Pre-requisites CE-UY 1502 or CE-UY 1002

Course Description This course introduces the students to mechanical, electrical and vertical transportation systems for buildings. It examines fundamental aspects of the design, procurement and construction of heating, ventilating and air conditioning (HVAC), supply and sanitary plumbing, fire detection and suppression, high- and low-voltage electrical, security, elevator and escalator and building management systems.

Course Objectives Understand basic principles of construction projects, interaction between design consultants and construction team, basic understanding of building HVAC, plumbing, fire protection, electrical and specialty systems. How sustainable, energy efficient building systems are incorporated into the building design. Learn how to read drawings and coordination.

Course Structure Lectures, discussion, course readings, case studies, field trip, etc.


Optional: List of journals: ASHRAE Journal, High Performance Buildings, Consulting Specifying Engineers

Course requirements Read chapters before class, class participation is important and will be graded, attendance will be taken.
Grading

QUIZZES: 30% (EACH 10%)
FINAL: 30%
HOMEWORK: 15%
PARTICIPATION: 20%
ATTENDANCE: 5%
TOTAL: 100%

Week I- January 24 – Tamayo/Rodwick
Introduction

Week II- January 31 (Chapters 1 and 2) - Rodwick
Thermal Environmental and Comfort Concepts, Fundamentals of Heat Transfer

Week III – February 7 - (Chapters 17 and 18) - Tamayo
Electrical Systems Materials and Equipment

Week IV – February 14 - (Chapters 3) Rodwick
Concepts of Building Science

Review for Quiz 1

Week V – February 21 (Chapters 4 and 5) - Rodwick
HEATING/COOLING Load Calculations

Quiz 1

Week VI- February 28 (Chapters 17 and 18) - Tamayo
Electrical Systems Materials and Equipment (Continued)

Week VII – March 7 (Chapter 19 and 20) - Tamayo
Electrical Design Principles, Lighting

SPRING BREAK March 13 through March 19

Week VIII – March 21 (Chapters 21 and 22) - Tamayo
Life Safety, Communication

Week IX– March 28 (Chapters 6, 7 and 23) - Rodwick
Review for Quiz 2
HVAC Equipment, Distribution Components and Systems, Acoustic Control

**Week X** - April 4 (Chapters 8 and 9) - Rodwick
HVAC Air and Water Distribution

**Quiz 2**

**Week XI** – April 11 (Chapter 24) - Tamayo
Building Conveying Systems

**Week XII** – April 18 (Chapters 12, 13, 14, 15, 16 and Part of 21) - Rodwick
Plumbing and Fire Protection

**Review for Quiz 3**

**Week XIII** April 25 (Chapters 11 and 25) - Rodwick and Tamayo
Plumbing and Fire Protection (Continued) and Emerging Sustainable Systems

**Quiz 3**

**Week XIV** May 2

**DRAWING REVIEW:** MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, FIRE ALARM, INFORMATION TECHNOLOGY, BMS, AND SECURITY

*REVIEW OF ALL SYSTEMS FOR COMPREHENSIVE FINAL EXAM*

**MAY 16TH - FINAL EXAM**

**Moses Center Statement of Disability**

If you are a student with a disability who is requesting accommodations, please contact New York University’s Moses Center for Students with Disabilities at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 2nd floor.

**NYU School of Engineering Policies and Procedures on Academic Misconduct**

A..Introduction: The School of Engineering encourages academic excellence in an environment that promotes honesty, integrity, and fairness, and students at the School of Engineering are expected to exhibit those qualities in their academic work. It is through the process of submitting their own work and receiving honest feedback on that work that students may progress academically. Any act of academic dishonesty is seen as an attack upon the School and will not be tolerated. Furthermore, those who breach the School’s
rules on academic integrity will be sanctioned under this Policy. Students are responsible for familiarizing themselves with the School’s Policy on Academic Misconduct.

B. Definition: Academic dishonesty may include misrepresentation, deception, dishonesty, or any act of falsification committed by a student to influence a grade or other academic evaluation. Academic dishonesty also includes intentionally damaging the academic work of others or assisting other students in acts of dishonesty. Common examples of academically dishonest behavior include, but are not limited to, the following:

1. Cheating: intentionally using or attempting to use unauthorized notes, books, electronic media, or electronic communications in an exam; talking with fellow students or looking at another person’s work during an exam; submitting work prepared in advance for an in-class examination; having someone take an exam for you or taking an exam for someone else; violating other rules governing the administration of examinations.

2. Fabrication: including but not limited: falsifying experiment data &/or citations.

3. Plagiarism: intentionally or knowingly representing the words or ideas of another as one’s own in any academic exercise; failure to attribute direct quotations, paraphrases, or borrowed facts or information.

4. Unauthorized collaboration: working together on work that was meant to be done individually.

5. Duplicating work: presenting for grading the same work for more than one project or in more than one class, unless express and prior permission has been received from the course instructor(s) or research adviser involved.

6. Forgery: altering any academic document, including, but not limited to, academic records, admissions materials, or medical excuses.