

**Construction & Civil Engineering Technology (CCET)**

**Division of Engineering, Computer Programming & Technology**

**West Campus Building 9, Room 140 (407) 582-1902/1903**

www.valenciacollege.edu/west/engineering/

**CRN 34208** **SESSION: Summer 2022 RTV**

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**Course Syllabus** *for* **BCN 2563 Building Systems Management**

**Course Description** *(From the Valencia Catalog):*

It is recommended that students take ETC 1251C before taking this course. Survey of design, installation and management of various plumbing, mechanical and electrical systems used in buildings. Concepts covered include heat loss and heat gain, comfort control, psychrometric charts, water systems, system installation and coordination, illumination and other selected topics.

**Class Meetings:** Required RTV meetings **Monday nights 6:30-9:00 PM**

**Text:** **Mechanical & Electrical Systems In Buildings -** Pearson; 6th edition (February 10, 2018)

by Janis & Tao; ISBN-10: 0134701186. Available in hardcover from campus bookstore or eBook.

**Instructor Information:**

Name: **Andrew Ray**

Cell Phone: 321-945-5995 please no calls past 9PM

Email: **ARay**@valenciacollege.edu

Office Hours: Virtual Office hours Tue/Wed/Thurs 3:00 - 5:00 PM

**Student Performance Assessment:**

 Lecture exams, quizzes, homework, class assignments, and the final project will determine your course grade. Your final average will be valued according to the following grading scale:

**Grading scale:** 90 - 100% = A **Grade Procedure:** (3) Quizzes = 30%

 80 - 89.9% = B Discussion Participation = 10%

 70 - 79.9% = C P/M/E Topic Report = 25%

 60 - 69.9% = D Photo assignment = 15%

 0 - 59.9% = F Final Exam = 20%

**Major Learning Outcomes:**

* Study the basics of water sources and supply - treatment and distribution piping, the drain/ waste/vent system, septic systems, and perform basic fixture calculations.
* Understand the basics of Design Context, including the study of how climate, site analysis, sun angles, drainage, LEED principles, and utility access affects the sustainable design of structures.
* Study the fundamentals of thermal transfer (heat gain/loss), and how successful building envelopes and insulation assemblies contribute to indoor air quality.
* Exhibit basic knowledge of the psychrometric chart to analyze thermal comfort and fundamentals of climate control systems, including heating and cooling equipment, ventilation, dehumidification, and heat pumps.
* Show comprehension of basic electrical systems, including power generation and distribution, circuit wiring & controls, illumination concepts and lighting fixtures, communications & data, and surge protection.

**Classroom Policies** for this class are published on this Faculty Front Door site:

 <http://frontdoor.valenciacollege.edu/syllabi.cfm?uid=aray>

 ***NOTE:*** Submission of your first assignment is considered proof that you have read, understand, and accept the classroom policies as published.

***Late Work:*** one week late -5%; 2 weeks -10%; more than 2 weeks: not accepted.