Bergen Community College
Division of Math, Science and Technology
Department of Industrial & Design Technology

Course Syllabus
DFT-215 Building Systems

Semester and year:
Course Number:
Meeting Times and Locations:

Instructor:
Office Location:
Phone:
Office Hours:
Email Address:

COURSE DESCRIPTION:

DFT-215 Building Systems provides an understanding of the basic principles and appropriate application of building service and environmental systems, incorporating thermal exposure, climate modification, environmental systems and energy use with a focus on sustainability and as these relate to the building envelope. The course also provides an introduction to aspects of plumbing, vertical transportation systems, and life safety in building design.
An HVAC project will be assigned.
2 lecture, 2 lab, 3 credits
Prerequisites: DFT-107 Drafting 1, DFT-207 Drafting II
Co-requisites: None

STUDENT LEARNING OBJECTIVES:

As a result of meeting the requirements in this course, students will be able to:	Student performance on these objectives will be measured by:
1. Recognize that today's buildings are expected to perform many functions other than their basic sheltering function.	Written assignments and examination questions.
2. Identify that it is the role of the architect as a generalist to have a good understanding of these functions.	Written assignments and examination questions.
3. Characterize the coordination of services provided by the various engineers and consultants involved in a building project.	Written assignments and examination questions.
4. Describe the functions and services of a building project with a focus on sustainability and an integrated approach to architecture.	Heating System design project.

COURSE CONTENT:

CHAPTER	TOPIC
1,2,3,4,5,6	Part I Design Context & Solar Geometry
7,8,9,10	Part II Thermal Control
11,12,13,14,15,16	Part III Illumination
17,18,19	Part IV Acoustics
20,21,22,23	Part V Water & Waste
24	Part VI Fire Protection
25,26,27,28,29	Part VII Electricity
31,32,33	Part IX Transportation

TEXTBOOK:

Stein/Reynold/McGuinness, Mechanical and Electrical Equipment for Buildings, 11th Edition, 2009 John Wiley & Sons

EVALUATION:

Midterm 20%
Final 20%
Class Attendance & Participation 10%

Design Project
1. Design & calculation 30%
2. Presentation & Drafting Quality . . 20%

TOTAL 100%

Drawings submitted after the due date will be lowered one full letter grade per class meeting that they are late. Drawings will not be accepted after the final submission date listed in the calendar and will receive a failing grade after that last submission date.

ATTENDANCE POLICY:

Attendance will be taken twice during each class period. The first attendance for the lecture portion of the class will be at the beginning of each class. The second attendance, for the laboratory portion of the class will be taken at 11:45 a.m. for classes beginning in the morning, 5:15 p.m. for classes beginning early afternoon, and 9:45 p.m. for evening classes.

If a student is absent from the lecture portion of the class, it will be recorded as an absence for the entire class period. If a student is absent from the laboratory portion of the class, it will be recorded as an absence from that portion of the class only.

A letter grade will be deducted from the class participation portion of your final grade for each absence beyond three absences from either portion of a class period.

SPECIAL NOTES:

A final grade cannot be assigned for the course until all drawings, projects and examinations for the course have been completed.

Make-up examinations will be administered in accordance with the instructor's and division's policy.

FACULTY ABSENCE PROCEDURE: Please note well.

A daily listing will appear in the glass case located in the main hall A bldg. which will indicate all classes which are cancelled. Students can consult this case before going to class. If students find a class cancelled which has not been listed, they should report this to the divisional dean's office (A325) or to the evening/Saturday office (L113).

CALENDAR:

Class Meeting	Date	Topic	Chapter
1.	_____	Introduction to class and semester. Designing for heating and cooling/Climate and site	1,2,3,4,5,6
2.	_____	Comfort - calculating heat loss and gain	1,2,3,4,5,6
3.	_____	Heat loss and gain continued	1,2,3,4,5,6
4.	_____	Heating systems-warm air	7,8,9,10
5.	_____	Heating systems - hydronic	7,8,9,10
6.	_____	Heating, cooling & ventilating for large scale projects	7,8,9,10
7.	_____	Environmental planning – design project	7,8,9,10
8.	_____	Midterm	
9.	_____	Water supply & waste – storm water management	20,21,22,23
10.	_____	Lighting – lighting design	Part III
11.	_____	Electrical systems	Part VII
12.	_____	Fire safety	Part VI
13.	_____	Acoustics	Part IV
14.	_____	Vertical transportation	Part IX
15	_____	Final exam	

All BCC students enrolled in credit courses are entitled to a WebAdvisor account. With WebAdvisor, you may register online, check your schedule, room assignments, GPA, and find out what courses you need to take. To find out more about WebAdvisor or to sign up online, visit <http://go.bergen.edu>! While there, please make sure you give us your preferred email address. You'll find directions how to do this at <http://go.bergen.edu/email>.