

LANEY COLLEGE
ENVIRONMENTAL CONTROL TECHNOLOGY
SPRING SEMESTER 2010

Course: Introduction to Building Commissioning

Course No. /Code: ECT 025

Units: 2 Units

Date/Time: Monday & Wednesday 5:30 – 6:50 PM

Instructor: Adan Rosillo

Email: arosillo@comcast.net

Course Description: After completing this course the students will be able to develop a commissioning plan for new and existing facilities, understand the use data collection instrumentation and protocols, analyze data to identify and solve issues on building systems specifically on HVAC systems. The student will learn how to write a commissioning report and calculate cost and benefits from commissioning existing buildings.

Outcomes:

- Identify key components of the commissioning process.
- Develop commissioning plans for new and existing buildings.
- Identify cost and benefits of the commissioning process
- Develop test procedures and data collection protocols
- Demonstrate proficiency in data analysis.
- Develop training protocols for building operators

Prerequisites: NONE

Text: None

Supplies Needed: Three ring binder, "thumb" drive.

Special Notes: The following is recommended but not a requisite to take this course:

- Email account to received electronic files

- Laptop computer
- Knowledge of spreadsheets (excel)

Class Schedule:

Week	Class	Date	Description
1	1	01/25/2010	Commissioning process Review _ Part 1
	2	01/27/2010	Commissioning process Review _ Part 2
2	3	02/01/2010	<ul style="list-style-type: none"> • Assign class projects: <ol style="list-style-type: none"> 1. Small office building with LEED • Planning Phase
	4	02/03/2010	Planning Phase Lab
3	5	02/08/2010	Planning Phase: Owner's Program
	6	02/10/2010	Planning Phase: Owner's Program Continue
4		02/15/2010	NO CLASS
	7	02/17/2010	Planning Phase: Commissioning Plan
5	8	02/22/2010	Planning Phase: Basis of Design
	9	02/24/2010	Design Phase: Bldg systems description
6	10	03/01/2010	Design Phase: Refine Commissioning Plan Specifications
	11	03/03/2010	Construction Phase: Construction Documents O&M TAB Functional Test
7	12	03/08/2010	Development of Functional Test
	13	03/10/2010	Construction Checklist
8	14	03/15/2010	Acceptance procedure
	15	03/17/2010	Class Project 1 Due Date Existing Building Commissioning
9	16	03/22/2010	Existing VS New building commissioning
	17	03/25/2010	Planning Phase: As - Operated
10	18	03/29/2010	Planning Phase: EBCx Commissioning plan
	19	03/31/2010	Investigation Phase: Utility Analysis
11	20	04/05/2010	Investigation Phase: Benchmarking
	21	04/07/2010	Investigation Phase: Data Collection
12	22	04/12/2010	Investigation Phase: Lab _ Data Collection
	23	04/14/2010	Investigation Phase: Data Analysis
13	24	04/19/2010	Investigation Phase: Lab _ Data Analysis
	25	04/21/2010	Investigation Phase: Recommendations
14	26	04/27/2010	Investigation Phase: Savings and cost analysis
	27	04/29/2010	Implementation Phase: Checklist
15	28	05/03/2010	Implementation Phase: O&M Manual
	29	05/05/2010	Implementation Phase: Systems Manual I
16	30	05/10/2010	Implementation Phase: Systems Manual II
	31	05/12/2010	Implementation Phase: Systems Manual III
17	32	05/17/2010	EBCx Report
	33	05/19/2010	Class Project 2 Due Date

18	34	05/24/2010	Class review
		05/26/2010	FINAL EXAM

Evaluation: The final grade will be assigned based on the following components:

1. Attendance and participation 30 points
2. Class Project No. 1 20 points
3. Class Project No. 2 20 points
4. Final Exam 30 points

TOTAL: 100 points

Safety: Some lab exercises will be conducted on a real life setting; students are expected to follow safety practices and recommendation from instructor.

Attendance: Students may be dropped from this course if the number of unjustifiable absences exceeds four weeks of class meetings.

Class Behavior: Students are encourage to observe a respectful behavior during class, no cell phones or iPods are allowed in class