

---

## CONSTRUCTION TECHNOLOGY DEPARTMENT

### Course Syllabus SPRING 2018

---

Course Number: **CNBT 1311**  
Course Title: **Construction Technology I**  
Prerequisite:  
Credits: **3 (3 Lecture)**

Course Length: **16 Week**  
Campus Location: **Alief Bissonet – Northwest.**  
Room Location:  
Class Time: **Friday @ 09:20am - 10:55am**

---

#### COURSE DESCRIPTION

Introduction to site preparation foundations, form work, safety tools, and equipment.

#### END OF COURSE OUTCOMES

Demonstrate safety practices and procedures; use tools and equipment; estimate material requirements from blueprints; and demonstrate methods and techniques used in various types of site preparation and foundations.

#### STUDENT LEARNING OUTCOMES

- SLO # 1 Understand terminology common to the construction technology
  - SLO # 2 Understand general principles of sustainability
  - SLO # 3 Understand roles and responsibilities of parties
  - SLO # 4 Best practices of modern facility management
  - SLO # 5 Be familiar with common safety concerns and protocol
- 

#### COURSE OBJECTIVES

Upon completion of this course, the student will:

- Provide an overview of the nature of the building process, project life cycle, the construction industry and its professional organizations
- Describe the roles of the technology for professional constructor, developer, architects, engineer, construction and facility manager, general contractor, subcontractor, and suppliers
- Understand the administration of a commercial construction technology including the basic jobs and roles on a construction site.
- Endow the students with the skills and awareness necessary to maximize the effectiveness of their internship
- Give the students an understanding and awareness of construction safety issues
- Develop and advance their technology skills.



---

COURSE REGULATIONS

**Required textbook(s) & additional resources:**

**SUSTAINABLE FACILITY MANAGEMENT, Operational Strategies for Today.** Sixth Edition By: John P. Fennimore.  
MSc, P.E.  
ISBN: 978 – 0 – 1325 - 5651- 4  
Publisher: Pearson

**Grading scale:**

90 – 100	A	4 Points per semester hour
80 – 89	B	3 Points per semester hour
70 – 79	C	2 Points per semester hour
60 – 69	D	1 Points per semester hour
Less than 59	F (FAILED)*	0 Points per semester hour

**\*F will be awarded to students that stop attending or do not withdraw from the class by the withdrawal deadline.**

**Course grading criteria:**

Quizzes /Assignments	45%
Attendance	10%
Class participation	10%
Midterm Exam	20%
Class Project / Final Grade	15%
<b>Total</b>	<b>100%</b>

**PLEASE READ IMPORTANT INFORMATION ON PAGE 3-4**



---

## COURSE POLICIES

### **ATTENDANCE**

Students are expected to attend classes regularly and to be on time for every class period. Students can be dropped from a class due to excessive absences. Excessive tardiness may be considered absences. Students are responsible for subjects, assignments, and projects covered during their absences. Consult the Student Handbook for more details or visit <http://www.hccs.edu/hccs/current-students/student-handbook>.

### **ACADEMIC HONESTY**

Scholastic dishonesty is treated with the utmost seriousness by the instructor and the College. Academic dishonesty includes, but it is not limited to the willful attempt to misrepresent one's work, cheat, plagiarize, or impede other students' scholastic progress. Consult the Student Handbook for more details.

### **STUDENTS WITH DISABILITIES**

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/district/students/disability-services/>. For Central College, call 713-718-6164.

### **TITLE IX**

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

**David Cross**

**Director EEO/Compliance**

**Office of Institutional Equity & Diversity**

**3100 Main**

**(713) 718-8271**

**Houston, TX 77266-7517 or Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)**

### **CELL PHONES**

All cell phones must be muted, set to vibrate, or turned off during class. Cell phone activity during class is deemed disruptive to the academic process and will not be tolerated. If you need to make or receive an emergency call, please leave the classroom.

### **CALCULATORS**

The use of calculators in this class is allowed. Cell phones are not calculators and are not allowed to be used for that purpose during class, tests, or exams.

## EXAMS

There will be two (2) exams as part of the grading of this class. Exams will include material from the lectures as well as content from the book. Students are responsible for all the material in the book whether or not it is discussed in class. No make-up exams will be given under any circumstances!

## FINAL PROJECT

Everyone will be responsible for doing a final project. The final project will be something handmade, not from a kit. Each student will have to use the knowledge that they have attained in this class in order to finish it. I will give you a couple of ideas, but it is the students' responsibility to submit their idea along with a schematic and sources cited for approval by the instructor.

## STUDENT ID

Students are required to obtain a Student ID. For additional information, consult the Student Handbook.

## PARKING RULES AND REGULATIONS

Students are required to follow HCC's regulations regarding parking and permits. For additional information, visit <http://www.hccs.edu/hccs/about-hcc/police/parking/parking-rules-and-regulations>

## BOOKS, TOOLS, AND SUPPLIES

Students are required to purchase and bring to class the required textbooks, tools, notebooks, supplies, and writing instruments as required by the instructor.

## DRESS CODE

Dress code must be appropriate for the class. Students must dress in a way that clothing and accessories do not compromise their safety and the safety of others. Proper foot wear is required in all laboratories. Absolutely no sandals or other footwear that exposes the feet will be allowed.

## CLASSROOM CONDUCT

Proper behavior is expected in all classes and laboratories. Foul language and horseplay are not allowed. Sleeping in class is not allowed.

## COMPLAINTS

It is the responsibility of the student to officially withdraw from a course before the official withdrawal deadline. A student who does not withdraw from a course by the deadline will receive an "F" as the final grade. Also note that under Section 51.907 of the Texas Education Code, an institution of higher education may not allow a student to drop more than six courses.

## SUPPLIES FOR CLASS

Students are responsible for getting the tools and measuring instruments that the instructor says to purchase. These will include, but may not be limited to, a multimeter, a bread board with a power source (this will be covered later in the semester), wire strippers and cutters, and all electronic components that will be needed to be successful in this class.

*"Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Student for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide any resources that HCC may possess."*



**COURSE TIMELINE & CONTENTS**

*Subject to change at the discretion of the instructor w/o prior notification*

WEEK	DATE	DESCRIPTION	NOTES
1	01/19/2018	<b>Course Rules and Orientation</b>	
		✓ Introduction.	
		✓ Purpose of the course.	
		✓ Overview of the course syllabus.	
		✓ Course policies.	
		✓ Required materials, textbook(s), supplies, and resources (if applicable).	
		✓ Disability support services.	
		✓ Registration, schedules, receipts, and student ID.	
		✓ Importance of updating and maintaining student data (Name, Address, ID #, Phone numbers, Email).	
		✓ Parking rules and Regulations.	
		✓ Classroom and Laboratory Safety.	
		✓ Course Withdrawal, Official day of record, and last day of Withdrawal.	
		✓ Courses tests, quizzes, exams, and assignments.	
		✓ Course grading policies.	
✓ Instructor Information.			
2	01/26/2018	<b>Chapter 1. Facility types and Management Methods</b>	
		○ Position of Facility Manager	
		○ Cultural Distinctions and Organizational Culture	
		○ Advancing in the facility Management Profession	
3	02/02/2018	○ Properties and Facilities	
		<b>CONT. Chapter 1.</b>	
		○ Green Building Rating Systems	<b>QUIZ #01 Chapter 1</b>
		○ The facility management team	
		○ Leadership	
○ Management Methodologies			
<b>Chapter 2. Sustainable Maintenance Operations</b>			
4	02/09/2018	○ Work – Order System	
		○ Assigning Work Orders	
		○ Types of Work Orders	
		○ Performing Preventive Maintenance	
5	02/16/2018	<b>CONT. Chapter 2.</b>	
		○ Sustainable Maintenance	<b>QUIZ #02 Chapter 2</b>
		○ CMMS and Procurement Management	
		○ CMMS and the Preventive Maintenance Function	
		○ Property Condition Surveys	
<b>Chapter 3. Managing Outsourced Services</b>			
6	02/23/2018	○ Reasons for outsourcing service	
		○ The outsourcing Process	
		○ Preparing for the Outsourcing Process	
		○ Traditional Contracts for Outsourcing	
		○ Service – Level Agreements	
7	03/02/2018	<b>CONT. Chapter 3.</b>	
		○ Writing Contract Specifications	<b>QUIZ #03 Chapter 3</b>
		○ Bidding	
		○ Contract Negotiations	



		<ul style="list-style-type: none"> <li>o Outsourcing Facility Management</li> </ul>	
		<b>REVIEW for Midterm</b>	
<b>8</b>	03/09/2018	<b>MIDTERM.</b>	
<b>9</b>	03/16/2018	<b>NO CLASS</b>	<b>SPRING BREAK 03/12 – 03/16/2018</b>
		<b>Chapter 4. Financial Management and Control</b>	
<b>10</b>	03/23/2018	<ul style="list-style-type: none"> <li>o Utilizing Funds</li> <li>o The Budgeting Process</li> <li>o Budget Management</li> <li>o Bad Budgeting Practices</li> <li>o The budget as a tool to find problems</li> <li>o Financial management for green Initiatives</li> </ul>	<b>QUIZ #04 Chapter 4</b>
<b>11</b>	03/30/2018	<b>NO CLASS</b>	<b>SPRING HOLIDAY</b>
		<b>Chapter 5. Facility and Global Environmental Management</b>	
<b>12</b>	04/06/2018	<ul style="list-style-type: none"> <li>o Environmental Management</li> <li>o Property - Related Environmental Concerns</li> <li>o Environmental Issues Prior to property Purchase</li> <li>o Lead – Based paint</li> <li>o Asbestos</li> <li>o Additional Environmental Concerns</li> <li>o Global Environmental Concerns</li> </ul>	<b>QUIZ #05 Chapter 5</b>
		<b>Chapter 6. Green Building Construction</b>	
<b>13</b>	04/13/2018	<ul style="list-style-type: none"> <li>o Sustainable buildings</li> <li>o Building Foundation and Support</li> <li>o Building Exterior Walls</li> <li>o Roof Construction and Maintenance</li> </ul>	
		<b>CONT. Chapter 6.</b>	
<b>14</b>	04/20/2018	<ul style="list-style-type: none"> <li>o Common Building Problems</li> <li>o Active Building Exterior Management</li> <li>o Building Interior Construction</li> <li>o Flooring</li> <li>o Passenger Conveyance</li> </ul>	<b>QUIZ #06 Chapter 6</b>
		<b>Chapter 7. Energy Management and Renewable Energy</b>	
<b>15</b>	04/27/2018	<ul style="list-style-type: none"> <li>o Sustainable Energy Management</li> <li>o Power generation and Delivery</li> <li>o Facility Strategies for Minimizing Power use and Costs</li> <li>o Monitoring and Benchmarking Energy</li> <li>o Rate Structures</li> </ul>	
		<b>CONT. Chapter 7.</b>	
<b>16</b>	05/04/2018	<ul style="list-style-type: none"> <li>o Lightning</li> <li>o Alternative Current motors</li> <li>o Water-sourced heat pumps</li> <li>o Renewable energy</li> <li>o Power storage and Microgrids</li> <li>o Fuel Cells</li> </ul>	
		<b>REVIEW for Final Exam</b>	
<b>17</b>	05/11/2018	<b>FINAL EXAM</b>	<b>FINAL DAY OF CLASS</b>

