



FACS 3377 Codes, Standards and Facility Maintenance

Spring Semester, 2018 (3 Credit Hours)

College of Health Sciences

Department of Family and Consumer Sciences

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Office Hours: by appointment.

SHSU Help Desk: 936-294-1950 (for log-in issues); 877-870-9214 or helpdesk@shsuonline.edu for other help

Course Meeting Times: Internet/SHSU Online

Technical Assistance: If you should experience technical issues with your computer during this course, contact the SHSU Help Desk as listed above.

Computer Recommendations: The SHSU Computer Services Office has compiled a list of recommended computer features that students should have to make the online experience productive. The link to this information is http://www.shsu.edu/~ucs_www/network/recommendations.html Be sure that the computer you use for quizzes and exams meets these recommendations to reduce the likelihood of electronic errors.

Course Description: FACS 3377 Codes, Standards and Facility Maintenance: A study of laws, codes, standards and regulations that are in effect to protect human health and safety. Included are fire and life safety codes, barrier-free design, and ergonomics. (3-0). Usually offered alternate semesters. Credit 3.

Text: Harmon, S. K. The Codes Guidebook for Interiors, Sixth Edition, John Wiley & Sons, Inc. 2014.

Course Objectives:

Upon completion of this course, the students should have knowledge that enables them to:

1. to evaluate application of building and accessibility codes through critical, analytical and strategic thinking.
2. to understand and apply knowledge of codes, standards and federal regulation to residential and commercial environments gained through research and analysis.
3. to communicate with industry persons and codes officials through use of technical terminology in clear oral and written forms identified within codes, standards, and federal regulations.
4. to communicate code based building features through alternate presentation techniques using photographic references.
5. to comprehend the impact of fire safety code on residential and commercial environments including fire separations and environments for safe egress.
6. to understand and be familiar with the mechanical fire and smoke detection and suppression systems as part of the fire safety codes.
7. to be able to develop appropriate space layouts for commercial interiors using codes, standards, state and federal regulations.
8. to comprehend and apply federal and state barrier-free requirements including ADA regulations to design development of environments.
9. to understand the management and maintenance of a residential or commercial environment in accordance to codes, standards and federal regulations.
10. to be aware of when research in codes is required and how to perform required research or when codes officials must be consulted.

Accreditation Information/Standards/Student Learning Outcomes: The following 2017 Council for Interior Design Accreditation standards will be addressed, and upon successful completion of the course, it is expected that students will meet the standards below.

- **Standard 5. Collaboration**
Student Learning Expectations
Students have **awareness** of:
 - a) the nature and value of integrated design practices.
 - b) the terminology and language necessary to communicate effectively with members of allied disciplines.
- **Standard 6. Business Practices and Professionalism**
Student Learning Expectations
Students have **awareness** of the:
 - c) breadth and depth of interior design's impact and value.**Program Expectations**
The interior design program provides exposure to the role and value of:
 - k) legal recognition for the profession.
 - l) professional organizations.
 - m) life-long learning.
- **Standard 7. Human-Centered Design**
Student Learning Expectations
Student work demonstrates **understanding** of:
 - a) the impact of the built environment on human experience, behavior, and performance.
 - b) the relationship between the natural and built environment as it relates to the human experience, behavior, and performance.
 - c) methods for gathering human-centered evidence.
Student work demonstrates the **ability** to:
 - e) apply human factors, ergonomics, and universal design principles to design solutions.
- **Standard 8. Design Process**
Student Learning Expectations
h) Students **understand** the importance of evaluating the relevance and reliability of information and research impacting design solutions.
Program Expectations
The interior design program includes:
 - i) exposure to a range of problem identification and problem solving methods.
- **Standard 9. Communication**
Student Learning Expectations
Students are **able** to effectively:
 - b) express ideas in oral communication.
 - c) express ideas in written communication.
- **Standard 16. Regulations and Guidelines**
Student Learning Expectations
a) Students have **awareness** of the origins and intent of laws, codes, and standards.
Student work demonstrates **understanding** of laws, codes, and standards that impact health, wellness, security, and fire and life safety, including:
 - b) sustainable environment guidelines.
 - c) compartmentalization: fire separation and smoke containment.
 - d) movement: access to the means of egress including stairwells, corridors, exit ways.
 - e) detection: active devices that alert occupants including smoke/heat detectors and alarm systems.
 - f) suppression: devices used to extinguish flames including sprinklers, standpipes, fire hose cabinets, extinguishers, etc.
Students **apply**:
 - g) industry-specific regulations and guidelines related to construction.
 - h) industry-specific regulations and guidelines related to products and materials.
 - i) federal, state/provincial, and local codes and guidelines.
 - j) barrier-free and accessibility regulations and guidelines.

Course Evaluation: Student grades are based on analysis assignments, and possible discussion postings. Written assignments will be evaluated on the basis of specific criteria for each assignment, including content, adherence to the assignment guidelines, grammar, and organization. Specific criteria for the assignments will be provided

on SHSU Online. A grade of C is required for credit toward a degree in interior design and as a prerequisite for the next level of course work in the interior design major.

895 - 1000 = A, 795 - 894 = B, 695 - 794 = C, 595 - 694 = D, 0 - 594 = F

Point Distribution:

8 Assignments (points vary per assn.)	425
2 Written Papers (100 points per paper)	200
1 Discussion assignment	75
Term Project	300

Total 1000

1. If given, quizzes are given only on the days indicated, and make-ups will only be given for verified, extenuating circumstances. Refer to the Course Calendar below for specific dates. Each quiz will have a 10-minute time limit. Once the 10 minutes allotted for quizzes has passed, the quiz will close. If you have need for additional time, bring me the documentation forms from the SHSU Counseling Center, as noted above, before the first quiz is taken. When possible, it is highly recommended that quizzes be taken on campus computers, as there are fewer connection and transmission errors.
2. Writing assignments and discussions are due by the date and time assigned, and may be submitted early. **Those assignments submitted after the due date will not be accepted.** It is recommended that assignments be submitted several hours before the deadline to avoid late points should there be transmission problems.
3. All students are expected to assist in maintaining an environment that is conducive to learning. Students are to treat faculty and other students with respect. During discussions there could be varying perspectives presented. All students are expected to be respectful of others' opinions.
 1. All work submitted must be the student's original work
 2. Discussion comments must include good English usage and a substantial submission of at least several sentences. Submissions indicating simply an agreement or disagreement with another student's postings are not acceptable and will not count as a submission for grading purposes.

Course Outline:

1. Chapter 1 - ABOUT THE CODES
 - a. A Brief History
 - b. Code Publications
 - c. Building Codes
 - d. Performance Codes
 - e. Fire Codes
 - f. Life Safety Code®
 - g. Plumbing Codes
 - h. Mechanical Codes
 - i. Electrical Codes
 - j. Energy Codes
 - k. Residential Code
 - l. Existing Building Code
 - m. Federal Regulations
 - n. Americans with Disabilities Act
 - o. Fair Housing Act
 - p. Energy Policy Act
 - q. Standards Organizations
 - r. National Fire Protection Association
 - s. American National Standards Institute
 - t. ASTM International
 - u. American Society of Heating, Refrigeration, and Air-Conditioning Engineers
 - v. Underwriters Laboratories
 - w. Local Codes
2. Chapter 2 - OCCUPANCY CLASSIFICATIONS AND LOADS
 - a. Understanding Occupancy Classifications
 - b. Classification Differences
 - c. Comparing the Codes
 - d. Description of Occupancies
 - e. Assembly (A) Occupancy
 - f. Business (B) Occupancy
 - g. Education (E) Occupancy
 - h. Factory (F) Occupancy
 - i. Hazardous (H) Occupancy
 - j. Institutional (I) Occupancy
 - k. Mercantile (M) Occupancy
 - l. Residential (R) Occupancy
 - m. Storage (S) Occupancy
 - n. Utility (U) Occupancy
 - o. New Versus Existing Occupancies
 - p. Incidental Use
 - q. More than One Occupancy Type
 - r. Determining Occupant Loads
3. Chapter 3 - CONSTRUCTION TYPES AND BUILDING SIZES
 - a. Understanding Construction Types
 - b. Comparing the Codes

- c. Combustible Versus Noncombustible
- d. Determining Construction Types
- e. Mixed Construction Types
- f. Occupancy Requirements
- g. Understanding Building Height and Area
- h. Height and Area Limitations
- 4. Chapter 4 – MEANS OF EGRESS
 - a. Means of Egress Components
 - b. Doors
 - c. Stairs
 - d. Escalators and Moving Walks
 - e. Ramps
 - f. Corridors
 - g. Aisles and Aisle Access ways
 - h. Adjoining and Intervening Rooms
 - i. Exits
 - j. Elevators
 - k. Areas of Refuge
 - l. Exit Discharges
 - m. Main Lobby
 - n. Foyer or Vestibule
 - o. Discharge Corridor
 - p. Means of Egress Capacity
 - q. Number of Exits
 - r. Exit Widths
 - s. Arrangement of Exits
 - t. Half Diagonal Rule
 - u. Travel Distance
 - v. Dead End Corridors
 - w. Common Path of Travel
 - x. Signage
 - y. Exit Signs
 - z. Emergency Lighting and Communication
- 5. Chapter 5 – FIRE RESISTANT MATERIALS AND ASSEMBLIES
 - a. Compartmentation in a Building
 - b. Fire Walls
 - c. Fire Barriers, Horizontal Assemblies and Fire Partitions
 - d. Fire Areas
 - e. Occupancy Separation
 - f. Tenant Separation
 - g. Incidental Use Areas or Rooms
 - h. Vertical Shaft Enclosures
 - i. Means of Egress Components
 - j. Smoke Barriers and Smoke Partitions
 - k. Smoke Compartments
 - l. Smoke proof Vertical Shafts
 - m. Vestibules
 - n. Opening Protectives
 - o. Rated Door Assemblies
 - p. Fire Windows Assemblies
 - q. Rated Glazing and Frames
 - r. Through-Penetration Protectives
 - s. Firestops and Smoke stops
 - t. Fireblocks and Draft stops
 - u. Damper Systems
 - v. Test Ratings
 - w. Tests for Wall and Floor/Ceiling Assemblies
 - x. Tests for Opening and Through-Penetration Protectives
 - y. Using Rated Materials and Assemblies
- 6. Chapter 6 – FIRE PROTECTION SYSTEMS
 - a. Detection Systems
 - b. Smoke Detectors
 - c. Heat Detectors
 - d. Manual Fire Alarms
 - e. Alarm Systems
 - f. Visual and Audible Alarm Systems
 - g. Voice Communication Systems
 - h. Accessible Warning Systems
 - i. Emergency Alarm Systems
 - j. Extinguishing Systems
 - k. Fire Extinguishers
 - l. Standpipes and Fire Hoses
 - m. Sprinkler Systems
 - n. Alternative Extinguishing Systems
- 7. Chapter 7 – PLUMBING AND MECHANICAL REQUIREMENTS
 - a. Comparing Plumbing Codes
 - b. Quantity of Plumbing Fixtures
 - c. Accessibility Percentages
 - d. Plumbing Fixture Requirements
 - e. Water Closets
 - f. Urinals
 - g. Lavatories
 - h. Sinks
 - i. Drinking Fountains
 - j. Bathtubs
 - k. Showers
 - l. Dishwashers and Clothes Washers
 - m. Toilet and Bathing Facilities
 - n. Single-Toilet Facilities
 - o. Multiple-Toilet Facilities
 - p. Bathing Facilities
 - q. Finish Requirements
 - r. Accessories and Grab Bars
 - s. Signage
 - t. Comparing Mechanical Codes
 - u. Mechanical Requirements
 - v. Mechanical Rooms
 - w. Cooling Loads
 - x. Zoning and Thermostat Locations
 - y. Exhaust Requirements
 - z. Ventilation Requirements
 - aa. Plenum Requirements
 - bb. Duct Requirements
 - cc. Access Requirements

- dd. Energy Efficiency and Water Conservation
- 8. Chapter 8 – ELECTRICAL AND COMMUNICATION REQUIREMENTS
 - a. Comparing Electrical Codes
 - b. Electrical Components and Devices
 - c. Electrical Panels/Rooms
 - d. Electrical Cabling and Conduit
 - e. Circuitry
 - f. Electrical Boxes
 - g. Grounding and Circuit Interrupters
 - h. Ground Fault Circuit Interrupters (GFCI)
 - i. Arc Fault Circuit Interrupters (AFCI)
 - j. Light Fixtures
 - k. Types of Light Fixtures
 - l. Location of Light Fixtures
 - m. Required Electrical Systems
 - n. Emergency Power Systems
 - o. Standby Power Systems
 - p. Energy Efficiency
 - q. Comparing Communication Codes
 - r. Communication Components and Devices
 - s. Communication Equipment/Rooms
 - t. Low Voltage Cabling
 - u. Types of Communication Systems
 - v. Telecommunication Systems
 - w. Television and Radio Systems
 - x. Alarm and Voice Communication Systems
 - y. Audiovisual Systems
 - z. Security Systems
- 9. Chapter 9 – FINISH AND FURNITURE SELECTION
 - a. Types of Finishes and Furnishings
 - b. Comparing the Codes
 - c. Standards and Testing
 - d. Steiner Tunnel Test
 - e. Radiant Panel Test
 - f. Pill Test
 - g. Vertical Flame Test
 - h. Room Corner Test
 - i. Smolder Resistance Test
 - j. Toxicity Test
 - k. Upholstered Seating Test
 - l. Mattress Test
 - m. Determining Finish Classifications
 - n. The Table
 - o. Obtaining Test Results
 - p. Pretested Finishes and Furniture
 - q. Nontested Finishes and Furniture
 - r. Accessibility Requirements
 - s. Accessible Finishes
 - t. Accessibility Furniture
- 10. Chapter 10 – CODE OFFICIALS AND THE CODE PROCESS
 - a. The Authority Having Jurisdiction
 - b. Code Jurisdictions
 - c. Code Departments
 - d. Code Officials
 - e. Code Enforcement
 - f. The Code Process
 - g. Code Research
 - h. Preliminary Review
 - i. Appeals Process
 - j. Permit Process
 - k. Construction and Inspection Process
 - l. Final Approval
 - m. Documentation and Liability
 - n. Construction Documents
 - o. Performance Design Documentation
 - p. Future Technology
- 11. Appendix A – ABOUT THE ADA
 - a. Places Requiring Accessibility
 - b. Original ADAAG
 - c. New ADA Guidelines
 - d. Level of Compliance
 - e. New Construction
 - f. Alterations
 - g. Existing Facilities
 - h. To the Maximum Extent Feasible
 - i. Regulation and Enforcement
 - j. Responsibility for Compliance
- 12. Appendix B – FAMILY RESIDENCES
 - a. Construction Types and Building Size
 - b. Means of Egress
 - c. Fire Resistance
 - d. Fire Protection
 - e. Plumbing
 - f. Mechanical
 - g. Electrical and Communication
 - h. Finishes and Furniture
 - i. Accessibility
- 13. Appendix C – EXISTING AND HISTORIC BUILDINGS
 - a. Existing Buildings
 - b. Repairs
 - c. Alternations
 - d. Change in Occupancy
 - e. Additions
 - f. Historical Buildings

Academic Policies:**Attendance (AP 800401):**

Each instructor is obligated to clarify her/his classroom policy regarding absences in writing to each student enrolled in class at the beginning of the semester. Each faculty member will announce to her/his class the policies for accepting late work or providing make-up examinations. A student shall not be penalized for three or fewer hours of absences when examinations or other assigned class work have not been missed. Class absences will be counted only from the actual day of enrollment for the individual student in that specific class.

<http://www.shsu.edu/dotAsset/b719129b-9593-424f-9d5a-920e2eda6890.pdf>

Procedures in Cases of Academic Dishonesty (AP 810213): Students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

<http://www.shsu.edu/dotAsset/728eec25-f780-4dcf-932c-03d68cade002.pdf>

Academic Grievance Procedures for Students (AP 900823): Academic grievances include disputes over course grades, unauthorized class absences/tardiness, suspension for academic deficiency, instructor's alleged unprofessional conduct related to academic matters, graduate comprehensive and oral exams, theses and dissertations, and withdrawal or suspension of privileges related to degree-required clinical rotation, internships, or other clinical service delivery in professional degree programs. If the dispute is determined to be based upon professional judgment, the aggrieved student is entitled to have, as appropriate and in turn, the department/school chair, College Academic Review Panel, academic dean, Dean of Graduate Studies (for graduate student issues), and Provost and Vice President for Academic Affairs form an opinion about the dispute and so advise the individual(s) involved.

<http://www.shsu.edu/dotAsset/Obb1346f-b8d6-4486-9290-dba24123d0d8.pdf>

Students with Disabilities (AP 811006): It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired. SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. NOTE: No accommodation can be made until a student registers with the Services for Students with Disabilities. <http://www.shsu.edu/dotAsset/187f9029-a4c6-4fb4-aea9-2d501f2a60f3.pdf>

Student Absences on Religious Holy Days (AP 861001): Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Section 51.911 (a) (2) defines a religious holy day as: "a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20...." A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

<http://www.shsu.edu/dotAsset/0953c7d0-7c04-4b29-a3fc-3bf0738e87d8.pdf>

Use of Telephones and Text Messagers in Academic Classrooms and Facilities (AP100728): As members of the classroom community, all students have a responsibility to others who are a part of that community. The goal is to produce an environment that is conducive to learning. Students are to treat faculty and other students with respect. Cell phones, laptop computers, pagers, and similar devices have become increasingly a part of everyday life in our society; however, when used in the classroom environment they can become disruptive. Students are to turn off all cell phones and other electronic equipment while in the classroom. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. Therefore, the use by students of cell phones, pagers, or similar communication devices during scheduled class-time is prohibited. All such devices should be turned off or put in a silent (vibrate) mode and ordinarily should not be taken out during class. If there is an emergency situation for a student, that student should inform the instructor and place himself/herself in a seat near the door where an exit for a phone call would be only minimally disruptive. With instructor approval, students may record lectures, take notes via laptop computer, etc., provided that they do not disturb other students in the process. Other exceptions to this policy may be granted at the discretion of the instructor. Any use of cell phones or other electronic devices during a test period is prohibited. Even the visible presence of a cell phone or other device during the test period may result in a zero for that test. Use of a cell phone during a test could result in a charge of academic dishonesty. During the test these instruments should be left at home or stored securely in such a way that they cannot be seen or used by the student. For a complete copy of Student Guidelines, see: <http://www.shsu.edu/dotAsset/6d35c9c9-e3e9-4695-a1a1-11951b88bc63.pdf>

Instructor Evaluations: Students that they will be asked to complete a course/instructor evaluation form toward the end of the semester.

Returning Work: Due to accreditation procedures the department is required to keep student work done in major FACS, ITEC and ART courses. Work will be returned to the student to inform the student of their evaluation and grade. All work will be collected and held by the instructor until after the accreditation site.

Q-Drops: A Q-drop is a drop made after the last date for tuition refunds (12th class day for fall/spring; 4th class day for summer) but before the date for which a drop would result in the grade of 'F' as published in the Academic Calendar. Students will be allowed no more than five Q-drops during their academic career at Sam Houston State University. Classes that are dropped prior to the Q-drop date will not count toward the limit. Students who have used their limit of five Q-drops will need to petition their respective dean to drop a class. If the dean refuses to grant permission to drop a class, a student will be required to remain in the class. This limit will take effect with the start of the fall 2004 semester. Any drops accumulated prior to the fall 2004 semester will not be included in the five Q-drop limit, nor will Q-drops from other universities.

Interior Design Student Handbook: Please see for additional information.

Course Calendar (subject to change):

Dates:	Readings and Assignments:
1/17-26	Please take this time to familiarize yourself with SHSU Online and make a personal calendar for this class. Please feel free to email or call me with any questions.
1/29-2/2	Chapters 1: Text, PowerPoint slides, notes, and articles 2/2: Syllabus Quiz due (for bonus points)
2/5-2/9	Chapter 2: Text, PowerPoint slides, notes, and articles 2/9: Chapter 2 Assignment due
2/12-2/16	Chapter 3: Text, PowerPoint slides, notes, and articles 2/16: Chapter 3 Assignment due
2/19-2/23	Chapter 4: Text, PowerPoint slides, notes, and articles 2/23: Chapter 4 Assignment and Chapter 4 Written Assignment due
2/26-3/2	Chapter 5: Text, PowerPoint slides, notes, and articles 3/2: Chapter 5 Assignment due
3/5-3/9	Chapter 6: Text, PowerPoint slides, notes, and articles 3/9: Chapter 6 Assignment due and Chapter 6 Written Assignment due
3/19-3/23	Chapter 7: Text, PowerPoint slides, notes, and articles 3/23: Chapter 7 Assignment due

3/26-3/30	Chapter 8: Text, PowerPoint slides, notes, and articles 3/30: Chapter 8 Assignment due
4/2-4/6	Chapter 9: Text, PowerPoint slides, notes, and articles 4/6: Chapter 9 Assignment due
4/9-4/13	Chapter 10: Text, PowerPoint slides, notes, and articles 4/13: Semester Project application due to the instructor and video discussion due
4/16-4/20	Health, Food and Safety: Text, PowerPoint slides, notes, and articles
4/23-4/27	Appendix A & B: Text, PowerPoint slides, notes, and articles
4/30-5/4	Appendix C & D: Text, PowerPoint slides, notes, and articles 5/4: Semester Project Due

Note: I strongly recommend that you note the above due dates on a calendar you check often. Former students have emphasized that writing due dates on a personal calendar has helped them manage the course much better and lessen the chances of forgetting to submit an assignment!

Please note that all due dates are on a Friday. Please remember **assignments not submitted by the due date are considered late and will not be accepted.**