

Chapter 127. Texas Essential Knowledge and Skills for Career Development and Career and Technical Education

Subchapter J. Hospitality and Tourism

Statutory Authority: The provisions of this Subchapter J issued Texas Education Code, §§7.102(c)(4); 28.002(a), (c), (n), and (o); and 28.025(a), (b-2), and (b-17), unless otherwise noted.

§127.469. Principles of Hospitality and Tourism (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.
- (b) Introduction.
 - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
 - (2) The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services.
 - (3) Principles of Hospitality and Tourism instruction includes:
 - (A) understand the role of the hospitality and tourism industry in the economy;
 - (B) understand the importance of customer service in the hospitality and tourism industry;
 - (C) understand the importance of safety in the hospitality and tourism industry;
 - (D) calculate accurate measurements, numerical concepts such as percentages, and estimations; and
 - (E) understand how scientific principles are used in the hospitality and tourism industry.
 - (2) The student uses verbal and nonverbal communication to provide a positive experience for guests and employees. The student is expected to:
 - (A) develop and execute formal and informal presentations;

and

- (B) practice customer service skills.
- (3) The student understands that personal success depends on personal effort. The student is expected to:
 - (A) demonstrate self-responsibility and self-management;

- (C) exercise punctuality and time-management skills;
- (D)

- (7) The student understands the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance. The student is expected to:
- (A) assess workplace conditions with regard to safety and health;
 - (B) analyze potential effects caused by common chemicals and hazardous materials;
 - (C) demonstrate first aid and cardiopulmonary resuscitation skills;
 - (D) apply safety and sanitation standards common to the workplace; iD5 (c) (s)1)e (s)1

- (E) demonstrate the preparation skills of items commonly prepared in food service operations such as breakfast cookery, salads and dressings, soups and sandwiches, stocks and sauces, appetizers, seafood, poultry, meat, pastas and grains, and fruits and vegetables; and
 - (F) demonstrate baking techniques such as yeast breads and rolls, quick breads, and desserts.
- (9) The student understands the various food service operations such as quick service, fast casual, casual, fine dining, institutional, and beverage service. The student is expected to:
- (A) explain quality customer service;
 - (B) demonstrate types of table setting, dining, and service skills;
 - (C) differentiate between service styles; and
 - (D) compare and contrast the roles of the front of the house and the back of the house in the various food service operations.
- (10) The student uses technology and computer applications to manage food service operations. The student is expected to:
- (A) use technology tools appropriate for the industry;
 - (B) operate technology applications to perform workplace tasks;
 - (C) explain and use point-of-sale systems in various food service operations;
 - (D) demonstrate knowledge in computer programs used for food management;
 - (E) evaluate information sources for culinary arts; and
 - (F) interpret data such as spreadsheets, databases, and sales reports.
- (11) The student demonstrates leadership, citizenship, and teamwork skills required for success. The student is expected to:
- (A) apply team-building skills;
 - (B) apply decision-making and problem-

- (A) understand and comply with laws and regulations specific to the food service industry; and
- (B) demonstrate a positive work ethic.

Source: The provisions of this §127.471 adopted to be effective April 7, 2022, 47 TexReg 1677.

§127.472. Advanced Culinary Arts (Two Credits), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. Prerequisite: Culinary Arts. Students shall be awarded two credits for successful completion of this course.
- (b) Introduction.
 - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
 - (2) The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services.
 - (3) Advanced Culinary Arts will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards in order to prepare students for success in higher education, certifications, and/or immediate employment.
 - (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (c) Knowledge and skills.
 - (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) model effective oral and written communication;
 - (B) practice professional grooming and hygiene standards;
 - (C) exercise punctuality and time-management skills;
 - (D) demonstrate self-respect and respect for others;
 - (E) demonstrate effective teamwork and leadership; and
 - (F) employ initiative, adaptability, and problem-solving techniques in practical applications.
 - (2) The student researches, analyzes, and designs a path to achieve career goals. The student examines jobs available in the food service industry and accesses career opportunities. The student is expected to:
 - (A) demonstrate major duties and qualifications for all staff and managerial positions to facilitate selection of career choices in the food service industry;
 - (B) model proper interview techniques;
 - (C) critique personal and short-term goals; and
 - (D) create and update a career portfolio.
 - (3) The student explains how employees, guests, and property are protected to minimize losses or liabilities. The student is expected to:
 - (A) determine the basics of safety in culinary arts;
 - (B) assess workplace conditions and identify safety hazards;

(K)

- (E) participate in community service opportunities.
- (8) The student knows and understands the importance of professional ethics and legal responsibilities. The student is expected to:
 - (A) discuss ethical reasoning to a variety of workplace situations in order to make decisions; and
 - (B) research information on organizational policies in handbooks and manuals.
- (9) The student knows and understands the importance of employability skills and is able to explore and effectively plan for managing travel and tourism careers. The student is expected to:
 - (A) identify and demonstrate behaviors and skills necessary to be employable;
 - (B) identify the training and education requirements that lead toward an appropriate certification for employment;
 - (C) demonstrate proper interview techniques;
 - (D) update or create a career portfolio;
 - (E) investigate continuing education opportunities within the industry;
 - (F) examine appropriate credentialing requirements to maintain compliance with industry requirements;
 - (G) compare and contrast the effect of stress, fatigue, and anxiety on job performance;
 - (H) complete required employment forms such as I-9, work visa, W-4, and licensures to meet employment requirements; and
 - (I) explore entrepreneurship opportunities within the travel and tourism industry.

(10) ve.7 ()0811p.190.501h5D)E(S-6546(T-000B)E-9383D)K8 BDC)0806(Te-5564)564.500760174900156698

(eplenee((e)1)1 tnc0.1u.19nc-204 ()s 02Tte0.1o.1o0(6)5o i02Ttee (e)t02Tteo6()0h0.5 (e((e)1)1)6.5 (i20t5 (m (ni)5p.1)1a.(e)1)1c.(e)1 o..i

§127.476. Hotel Management (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisite: Principles of Hospitality and Tourism. Students shall be awarded one credit for successful completion of this course.
- (b) Introduction.
 - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
 - (2) The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services.
 - (3) Hotel Management focuses on the knowledge and skills needed to pursue staff and management positions available in the hotel industry. This in-depth study of the lodging industry includes departments within a hotel such as front desk, food and beverage, housekeeping, maintenance, human resources, and accounting. This course will focus on, but not be limited to, professional communication, leadership, management, human resources, technology, and accounting.
 - (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (c) Knowledge and skills.
 - (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) organize oral and written information;
 - (B) compose and present individually and in teams a variety of written documents such as agendas, thank you letters, presentations, and advertisements;
 - (C) calculate correctly using numerical concepts such as percentage and estimation in practical situations; and
 - (D) examine and apply how scientific principles are used in the hotel industry.
 - (2) The student uses verbal and nonverbal communication skills to create, express, and interpret

- (B) employ critical-thinking and interpersonal skills to resolve conflicts with individuals such as coworkers, employers, guests, and clients; and
 - (C) interpret and use industry standards for principles of budgeting and forecasting to maximize profit and growth.
- (4) The student demonstrates an understanding that personal success depends on personal effort. The student is expected to:
- (A) demonstrate an understanding of self-responsibility and self-management;
 - (B) identify and demonstrate both positive and negative work behaviors and personal qualities for employability; and
 - (C) evaluate the effects of health and wellness on employee performance.
- (5) The student develops principles in time management, decision making, effective communication, and prioritization. The student is expected to:
- (A) apply effective practices for managing time and energy;
 - (B) develop and implement stress-management techniques;
 - (C) assemble and analyze the various steps in the decision-making process; and
 - (D) evaluate the importance of balancing a career, family, and leisure activities and develop various techniques to reduce conflict.
- (6) The student understands the importance of employability skills. The student is expected to:
- (A) assemble the required training or education requirements that lead to an appropriate industry certification;
 - (B) comprehend and model skills related to seeking employment;
 - (C) assemble and/or update an electronic personal career portfolio;
 - (D) complete a job application in written and electronic format;
 - (E) examine and model proper interview techniques in applying for employment;
 - (F) complete required employment forms such as I-9, work visa, W-4, and licensures to meet employment requirements;
 - (G)

- (H) comprehend and model professional attire.
- (8) The student uses information technology tools specific to lodging management to access, manage, integrate, and create information. The student is expected to:
 - (A) use information technology tools to evaluate lodging work responsibilities;
 - (B) evaluate technology tools to perform workplace tasks;
 - (C) understand and evaluate the hotel/guest cycle with applicable technology;
 - (D) prepare and present complex multimedia publications;
 - (E) demonstrate knowledge and use of point-of-sale systems;
 - (F) evaluate Internet resources for industry information; and
 - (G) evaluate current and emerging technologies to improve guest services.
- (9) The student uses leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives. The student is expected to:
 - (A)

iguendtltd .9 y (nd)6 ()0.6 (o)6 (bj0o)6 ((p)a()08.6n (h)6 (

- (C) differentiate the functions of meeting and event planning and how they correlate to the individual lodging property; and
- (D) understand the importance of check-out procedures to ensure guest satisfaction and verify settlement of account.

Source: The provisions of this §127.476 adopted to be effective April 7, 2022, 47 TexReg 1677.

§127.477. Hospitality Services (Two Credits), Adopted 2015.

(a) General requirements. This course is recommended for students in Grades 11 and 12. Recommended prerequisites: Principles of Hospitality and Tourism, Hotel Management, and Travel and Tourism Management. Students shall be awarded two credits for successful completion of this course.

(b) Introduction.

- (1) a nerccMa wecMic23.p -0ln (n8 (wa)3.9Ma)13.1 0td wauwan (nn)13.da-90Mic23ln67e)5w4ueMlc23),7

- (B) demonstrate flexibility to learn new knowledge and skills;
- (C) prioritize work responsibilities and life responsibilities;

(8) The student reviews the importance of management systems such as health, safety, and environmental and their function in performance and regulatory compliance. The student is expected to:

- (A) determine local safety and sanitation requirements;
- (B) explain how guests and property are protected to minimize losses or liabilities;
- (C) outline safety and security issues and analyze solutions for individuals or groups in multiple environments to minimize risks;

(upsiindiet5 ito2itbot30.5 (n63 (t)02)e (t3042.cecc004 Tv)042. (5)1 (d)042. (o)1 (nm (s)0.5 (5)1 (r (a)3.04 Tce)042.c

- (A) develop technical vocabulary for lodging, food and beverage service, recreation, and

- (G) display effective listening skills used in the workplace.
- (2) The student develops skills for success in the workplace. The student is expected to:
 - (A) formulate and model appropriate grooming and appearance for the workplace;
 - (B) model dependability, punctuality, and initiative;
 - (C) display positive interpersonal skills such as respect for diversity;
 - (D) differentiate types of diversity from both the employer and customer perspective;
 - (E) exhibit appropriate business and personal etiquette in the workplace;
 - (F) exhibit productive work habits, ethical practices, and a positive attitude;
 - (G) integrate knowledge of personal and occupational safety practices in the workplace;
 - (H) collaborate with others to support the organization and complete assigned tasks as a team;
 - (I) organize work to fulfill responsibility.

- (B) model leadership through participation in activities such as career and technical student organizations.

- (vii) letters of recommendation;
- (viii) cover letters;
- (ix) documentation of preparation for state or national industry certification such as food sanitation certification; and
- (x) any other supporting documents;
- (B) present the portfolio to interested stakeholders;
- (C) evaluate employment options, including salaries and benefits;
- (D) determine effective money management and financial planning techniques to manage:
 - (i) insurance and benefits;
 - (ii) taxes;
 - (iii) retirement;
 - (iv) relocation costs;
 - (v) a budget;
 - (vi) housing costs; and
 - (vii) transportation costs; and
- (E) develop a personal budget based on career choice using effective money management and financial planning techniques.

Source: The provisions of this §127.478 adopted to be effective 4/6/78 by the Board of Regents of the State University of New York, Chapter 478 of the Laws of 1978, as amended by Chapter 478 of the Laws of 1979, Chapter 478 of the Laws of 1980, Chapter 478 of the Laws of 1981, Chapter 478 of the Laws of 1982, Chapter 478 of the Laws of 1983, Chapter 478 of the Laws of 1984, Chapter 478 of the Laws of 1985, Chapter 478 of the Laws of 1986, Chapter 478 of the Laws of 1987, Chapter 478 of the Laws of 1988, Chapter 478 of the Laws of 1989, Chapter 478 of the Laws of 1990, Chapter 478 of the Laws of 1991, Chapter 478 of the Laws of 1992, Chapter 478 of the Laws of 1993, Chapter 478 of the Laws of 1994, Chapter 478 of the Laws of 1995, Chapter 478 of the Laws of 1996, Chapter 478 of the Laws of 1997, Chapter 478 of the Laws of 1998, Chapter 478 of the Laws of 1999, Chapter 478 of the Laws of 2000, Chapter 478 of the Laws of 2001, Chapter 478 of the Laws of 2002, Chapter 478 of the Laws of 2003, Chapter 478 of the Laws of 2004, Chapter 478 of the Laws of 2005, Chapter 478 of the Laws of 2006, Chapter 478 of the Laws of 2007, Chapter 478 of the Laws of 2008, Chapter 478 of the Laws of 2009, Chapter 478 of the Laws of 2010, Chapter 478 of the Laws of 2011, Chapter 478 of the Laws of 2012, Chapter 478 of the Laws of 2013, Chapter 478 of the Laws of 2014, Chapter 478 of the Laws of 2015, Chapter 478 of the Laws of 2016, Chapter 478 of the Laws of 2017, Chapter 478 of the Laws of 2018, Chapter 478 of the Laws of 2019, Chapter 478 of the Laws of 2020, Chapter 478 of the Laws of 2021, Chapter 478 of the Laws of 2022, Chapter 478 of the Laws of 2023, Chapter 478 of the Laws of 2024.

- (c) Knowledge and skills.
 - (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to hospitality services;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as leadership, appreciation for diversity, conflict management, customer service

- (B) practice technical procedures such as registration, rate assignment, room assignment, and determination of payment methods needed to meet guest needs;
- (C) examine, understand, and articulate job-specific technical vocabulary;
- (D) demonstrate proficiency in the duties for an appropriate department of a hotel or tourism venue; and
- (E) collect representative work samples.

Source: The provisions of this §127.480 adopted to be effective April 7, 2022, 47 TexReg 1677.

§127.482. Food Science (One Credit), Adopted 2021.

- (a) Implementation. The provisions of this section shall be implemented by school districts beginning with the 2024-2025 school year.
 - (1) No later than August 31, 2024, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.
 - (2) If the commissioner makes the determination that instructional materials funding has been made ava.6 (ns)2.8 (t)5.5 (r)6.7 (u)

- (A) hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power that have been tested over a wide variety of conditions are incorporated into theories; and
 - (B) scientific theories are based on natural and physical phenomena and are capable of being tested by multiple independent researchers. Unlike hypotheses, scientific theories are well established and highly reliable explanations, but they may be subject to change as new areas of science and new technologies are developed.
- (6) Scientific inquiry is the planned and deliberate investigation of the natural world using scientific and engineering practices. Scientific methods of investigation are descriptive, comparative, or experimental. The method chosen should be appropriate to the question being asked. Student learning for different types of investigations include descriptive investigations, which involve collecting data and recording observations without making comparisons; comparative investigations, which involve collecting data with variables that are manipulated to compare results; and experimental investigations, which involve processes similar to comparative investigations but in which a control is identified.
- (A) Scientific practices. Students should be able to ask questions, plan and conduct investigations to answer questions, and explain phenomena using appropriate tools and models.
 - (B) Engineering practices. Students should be able to identify problems and design solutions using appropriate tools and models.
- (7) Scientific decision making is a way of answering questions about the natural world involving its own set of ethical standards about how the process of science should be carried out. Students should be able to distinguish between scientific decision-making methods (scientific methods) and ethical and social decisions that involve science (the application of scientific information).
- (8) Science consists of recurring themes and making connections between overarching concepts. Recurring themes include systems, models, and patterns. All systems have basic properties that can be described in space, time, energy, and matter. Change and constancy occur in systems as patterns and can be observed, measured, and modeled. These patterns help to make predictions that can be scientifically tested, while models allow for boundary specification and provide a tool for understanding the ideas presented. Students should analyze a system in terms of its components and how these components relate to each other, to the whole, and to the external environment.
- (9) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
- (10) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (d) Knowledge and skills.
- (1) The student demonstrates professional standards/employability skills as required by the food service business and industry. The student is expected to:
 - (A) apply interpersonal communication skills in the food service business and industry settings;
 - (B) explain the science of food and its application in the food service business and industry.

- (B) relate the impact of past and current research on scientific thought and society, including research methodology, cost-benefit analysis, and contributions of diverse scientists and engineers as related to the content; and
 - (C) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics or food science field.
- (6) The student analyzes household and commercial sustainability and regulatory practices in food production. The student is expected to:
- (A) research and investigate resource use, sustainability, and conservation in food production such as with water, land, and oceans;
 - (B) analyze the effect of food on the decomposition cycle, including composting, recycling, and disposal; and
 - (C) demonstrate appropriate methods for sorting and disposing of food waste, including fats and oils, and packaging waste from food production.
- (7) The student analyzes the role of acids and bases in food science. The student is expected to:
- (A) evaluate physical and chemical properties of acids and bases; and
 - (B) analyze the relationship of pH to the properties, safety, and freshness of food.
- (8) The student evaluates the principles of microbiology and food safety practices. The student is expected to:
- (A) investigate the properties of microorganisms that cause food spoilage;
 - (B) compare food intoxication and food infection;
 - (C) examine methods to destroy or inactivate harmful pathogens in foods;
 - (D) compare beneficial and harmful microorganisms, including lactic acid bacteria, acetic acid bacteria, various baking and brewing yeasts, *E. coli*, *Staphylococcus*, *Clostridium botulinum*, *Clostridium perfringens*, *Salmonella*, *Listeria*, and *Shigella*;
 - (E) analyze sanitary food-handling practices such as personal hygiene or equipment sanitation; and
 - (F) prepare for a state or national food manager sanitation certification or alternative credential within the field of food science technology.
- (9) The student examines the chemical properties of food. The student is expected to:
- (A) describe acids, bases, salts, carbohydrates, lipids, proteins and other elements, compounds, and mixtures related to food science;
 - (B) compare heterogeneous and homogeneous mixtures;
 - (C) analyze chemical and physical changes in food; and
 - (D) use chemical symbols, formulas, and equations in food science such as oxidation of sugars in a cut apple or fermentation in the production of yogurt.
- (10) The student analyzes solutions, colloids, solids, gels, foams, and emulsions in food science. The student is expected to:
- (A) identify the solvent and solute in various solutions such as brines;
 - (B) compare unsaturated, saturated, and supersaturated solutions, including their effects on boiling and freezing points in food preparation such as when making candy or ice cream;
 - (C) calculate the concentration of a solution using mass percent such as the concentration of sugar needed for crystallization;

- (D) describe the properties of colloidal dispersions such as gelatin, mayonnaise, or milk;
 - (E) differentiate between and give examples of temporary, semi-permanent, and permanent emulsions;
 - (F) investigate the relationships between the three parts of a permanent emulsion; and
 - (G) create temporary, semi-permanent, and permanent food emulsions.
- (11) The student analyzes the functions of enzymes in food science. The student is expected to:
- (A) describe the role of enzymes as catalysts in chemical reactions of food, including cheese-making, the enzymatic tenderization of meat, and oxidation of sugars in fruit;
 - (B) explain the relationship between an enzyme and a substrate;
 - (C) analyze the functions of enzymes in digestion, including the factors that influence enzyme activity, and relate enzymatic activity in digestion to dietary restrictions; and
 - (D) analyze enzyme reactions and food preparation (e.g., bread, beer, wine, vinegar, soy sauce, and pickles).

(16) The student evaluates the properties of carbohydrates in food and their effects on food production. The student is expected to:

- (A) identify the physical properties and chemical structures of simple and complex carbohydrates;
- (B) describe the functions of carbohydrates such as caramelization, crystallization, and thickening agents in food production;
- (C) describe the processes of gelatinization and retrogradation in food production; and
- (D) create food products using simple and complex carbohydrates.

(17) The student evaluates the properties of fats in food and their effects on food production. The student is expected to:

- (A) identify the physical properties and chemical structures of saturated and unsaturated fats;
- (B) describe the functions of different types of fats in food production;
- (C) demonstrate methods for controlling fat oxidation;
- (D) analyze the effects of temperature on fats in food preparation;
- (E) conduct laboratory experiments using the scientific processes to explore the functions of fats in food production.

- (22) The student analyzes processes that manage bacteria to safe levels during food production. The student is expected to investigate processes that manage food bacteria such as dehydration, pasteurization, and food irradiation.
- (23) The student examines packaging and labeling guidelines. The student is expected to:
 - (A) research and evaluate federal food packaging regulations, including the information