Subject	Chapter 130. Career and Technical Education			
Course Title	§130.208. Pathophysiology (One-Half to One Science Credit).			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(a) General Requirements. This course is recommended for students in Grades 11-12. Recommended prerequisites: three credits of science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).				
(b) Introduction.				
(1) Pathophysiology. In Pathophysiology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology. (2) Nature of science. Science, as defined by the National Academy of Sciences, is the "use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process." This vast body of changing and increasing knowledge is described by physical, mathematical, and conceptual models. Students should know that some questions are outside the realm of science because they deal with phenomena that are not scientifically testable. (3) Scientific inquiry. Scientific inquiry is the planned and deliberate investigation of the natural world. Scientific methods of investigation are experimental, descriptive, or comparative. The method chosen should be appropriate to the question being asked. (4) Science and social ethics. Scientific decision making is a way of answering questions about the natural world. 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). (5) Science, systems, and models. A system is a collection of cycles, structures, and processes that interact. 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. 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.				
(c) Knowledge and Skills				
(1) The student conducts investigations, for at least 40% of instructional time, using safe, environmentally appropriate, and ethical practices. These investigations must involve actively obtaining and analyzing data with physical equipment, but may also involve experimentation in a simulated environment as well as field observations that extend beyond the classroom. The student is expected to:	(A) demonstrate safe practices during laboratory and field investigations	(1) demonstrate safe practices during laboratory investigations		

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(1) The student conducts investigations, for at least 40% of instructional time, using safe, environmentally appropriate, and ethical practices. These investigations must involve actively obtaining and analyzing data with physical equipment, but may also involve experimentation in a simulated environment as well as field observations that extend beyond the classroom. The student is expected to:	(A) demonstrate safe practices during laboratory and field investigations	(2) demonstrate safe practices during field investigations		
(1) The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. These investigations must involve actively obtaining and analyzing data with physical equipment, but may also involve experimentation in a simulated environment as well as field observations that extend beyond the classroom. The student is expected to:	(B) demonstrate an understanding of the use and conservation of resources and the proper disposal or recycling of materials	(1) demonstrate an understanding of the use of resources		

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(1) The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. These investigations must involve actively obtaining and analyzing data with physical equipment, but may also involve experimentation in a simulated environment as well as field observations that extend beyond the classroom. The student is expected to:	(B) demonstrate an understanding of the use and conservation of resources and the proper disposal or recycling of materials	(2) demonstrate an understanding of the conservation of resources		
(1) The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. These investigations must involve actively obtaining and analyzing data with physical equipment, but may also involve experimentation in a simulated environment as well as field observations that extend beyond the classroom. The student is expected to:	(B) demonstrate an understanding of the use and conservation of resources and the proper disposal or recycling of materials	(3) demonstrate an understanding of the proper disposal or recycling of materials		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(A) know the definition of science and understand that it has limitations, as specified in subsection (b)(2) of this section			

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(B) know that hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power which have been tested over a wide variety of conditions are incorporated into theories	(1) know that hypotheses are tentative statements that must be capable of being supported or not supported by observational evidence		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(B) know that hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power which have been tested over a wide variety of conditions are incorporated into theories	(2) know that hypotheses are testable statements that must be capable of being supported or not supported by observational evidence		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(B) know that hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power which have been tested over a wide variety of conditions are incorporated into theories	(3) [know that] Hypotheses of durable explanatory power which have been tested over a wide variety of conditions are incorporated into theories		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(C) know 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	(1) know scientific theories are based on natural phenomena		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(C) know 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	(2) know scientific theories are based on physical phenomena		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(C) know 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	(3) know scientific theories are capable of being tested by multiple independent researchers		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(C) know 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	(4) [know that] 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		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(D) distinguish between scientific hypotheses and scientific theories			
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(1) plan descriptive investigations, including asking questions		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(2) plan descriptive investigations, including formulating testable hypotheses		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(3) plan descriptive investigations, including selecting equipment		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(4) plan descriptive investigations, including selecting technology		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(5) implement descriptive investigations, including asking questions		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(6) implement descriptive investigations, including formulating testable hypotheses		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(7) implement descriptive investigations, including selecting equipment		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(8) implement descriptive investigations, including selecting technology		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(9) plan comparative investigations, including asking questions		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(10) plan comparative investigations, including formulating testable hypotheses		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(11) plan comparative investigations, including selecting equipment		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(12) plan comparative investigations, including selecting technology		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(13) implement comparative investigations, including asking questions		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(14) implement comparative investigations, including formulating testable hypotheses		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(15) implement comparative investigations, including selecting equipment		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(16) implement comparative investigations, including selecting technology		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(17) plan experimental investigations, including asking questions		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(18) plan experimental investigations, including formulating testable hypotheses		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(19) plan experimental investigations, including selecting equipment		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(20) plan experimental investigations, including selecting technology		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(21) implement experimental investigations, including asking questions		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(22) implement experimental investigations, including formulating testable hypotheses		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(23) implement experimental investigations, including selecting equipment		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(E) plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	(24) implement experimental investigations, including selecting technology		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(1) collect qualitative data using tools		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(2) collect quantitative data using tools		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(3) organize qualitative data using tools		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(4) organize quantitative data using tools		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(5) make measurements with accuracy using tools		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(F) collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, meter sticks, and models, diagrams, or samples of biological specimens or structures	(6) make measurements with precision using tools		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(G) analyze, evaluate, make inferences, and predict trends from data	(1) analyze data		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(G) analyze, evaluate, make inferences, and predict trends from data	(2) evaluate data		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(G) analyze, evaluate, make inferences, and predict trends from data	(3) make inferences from data		

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(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(G) analyze, evaluate, make inferences, and predict trends from data	(4) predict trends from data		
(2) The student uses scientific methods and equipment during laboratory and field investigations. The student is expected to:	(H) communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports	(1) communicate valid conclusions supported by the data through methods		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(1) in all fields of science, analyze scientific explanations by using empirical evidence, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(2) in all fields of science, analyze scientific explanations by using logical reasoning, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(3) in all fields of science, analyze scientific explanations by using experimental testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(4) in all fields of science, analyze scientific explanations by using observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(5) in all fields of science, evaluate scientific explanations by using empirical evidence, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(6) in all fields of science, evaluate scientific explanations by using logical reasoning, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(7) in all fields of science, evaluate scientific explanations by using experimental testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(8) in all fields of science, evaluate scientific explanations by using observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(9) in all fields of science, critique scientific explanations by using empirical evidence, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(10) in all fields of science, critique scientific explanations by using logical reasoning, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(11) in all fields of science, critique scientific explanations by using experimental testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student	(12) in all fields of science, critique scientific explanations by using observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(B) communicate and apply scientific information extracted from various sources such as current events, news reports, published journal articles, and marketing materials	(1) communicate scientific information extracted from various sources		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(B) communicate and apply scientific information extracted from various sources such as current events, news reports, published journal articles, and marketing materials	(2) apply scientific information extracted from various sources		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(C) draw inferences based on data related to promotional materials for products and services	(1) draw inferences based on data related to promotional materials for products		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(C) draw inferences based on data related to promotional materials for products and services	(2) draw inferences based on data related to promotional materials for services		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(D) evaluate the impact of scientific research on society and the environment	(1) evaluate the impact of scientific research on society		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(D) evaluate the impact of scientific research on society and the environment	(2) evaluate the impact of scientific research on the environment		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(E) evaluate models according to their limitations in representing biological objects or events			
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(F) research and describe the history of science and contributions of scientists	(1) research the history of science		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(F) research and describe the history of science and contributions of scientists	(2) research the contributions of scientists		
(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(F) research and describe the history of science and contributions of scientists	(3) describe the history of science		

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(3) The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:	(F) research and describe the history of science and contributions of scientists	(4) describe the contributions of scientists		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(A) identify biological and chemical processes at the cellular level	(1) identify biological processes at the cellular level		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(A) identify biological and chemical processes at the cellular level	(2) identify chemical processes at the cellular level		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(1) detect changes resulting from mutations by examining cells		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(2) detect changes resulting from mutations by examining tissues		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(3) detect changes resulting from mutations by examining organs		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(4) detect changes resulting from mutations by examining systems		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(5) detect changes resulting from neoplasms by examining cells		

Subject	Chapter 130. Career and Technical Education			
Course Title	§130.208. Pathophysiology (One-Half to One Science Credit).			
TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(6) detect changes resulting from neoplasms by examining tissues		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(7) detect changes resulting from neoplasms by examining organs		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(B) detect changes resulting from mutations and neoplasms by examining cells, tissues, organs, and systems	(8) detect changes resulting from neoplasms by examining systems		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(C) identify factors that contribute to disease such as age, gender, environment, lifestyle, and heredity	(1) identify factors that contribute to disease		
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(D) examine the body's compensating mechanisms occurring under various conditions			
(4) The student analyzes the mechanisms of pathology. The student is expected to:	(E) analyze how the body attempts to maintain homeostasis when changes occur			
(5) The student examines the process of pathogenesis. The student is expected to:	(A) identify pathogenic organisms using microbiological techniques			
(5) The student examines the process of pathogenesis. The student is expected to:	(B) differentiate the stages of pathogenesis, including incubation period, prodromal period, and exacerbation or remission	(1) differentiate the stages of pathogenesis, including incubation period		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(5) The student examines the process of pathogenesis. The student is expected to:	(B) differentiate the stages of pathogenesis, including incubation period, prodromal period, and exacerbation or remission	(2) differentiate the stages of pathogenesis, including prodromal period		
(5) The student examines the process of pathogenesis. The student is expected to:	(B) differentiate the stages of pathogenesis, including incubation period, prodromal period, and exacerbation or remission	(3) differentiate the stages of pathogenesis, including exacerbation or remission		
(5) The student examines the process of pathogenesis. The student is expected to:	(C) analyze the body's natural defense systems against infection such as barriers, the inflammatory response, and the immune response	(1) analyze the body's natural defense systems against infection		
(5) The student examines the process of pathogenesis. The student is expected to:	(D) evaluate the effects of chemical agents, environmental pollution, and trauma on the disease process	(1) evaluate the effects of chemical agents on the disease process		
(5) The student examines the process of pathogenesis. The student is expected to:	(D) evaluate the effects of chemical agents, environmental pollution, and trauma on the disease process	(2) evaluate the effects of environmental pollution on the disease process		
(5) The student examines the process of pathogenesis. The student is expected to:	(D) evaluate the effects of chemical agents, environmental pollution, and trauma on the disease process	(3) evaluate the effects of trauma on the disease process		
(5) The student examines the process of pathogenesis. The student is expected to:	(E) research stages in the progression of disease			

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(1) describe on the nature of diseases according to etiology		
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(2) describe on the nature of diseases according to signs		
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(3) describe on the nature of diseases according to symptoms		
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(4) describe on the nature of diseases according to diagnosis		
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(5) describe on the nature of diseases according to prognosis		
(6) The student examines a variety of human diseases. The student is expected to:	(A) describe on the nature of diseases according to etiology, signs and symptoms, diagnosis, prognosis, and treatment options	(6) describe on the nature of diseases according to treatment options		
(6) The student examines a variety of human diseases. The student is expected to:	(B) explore advanced technologies for the diagnosis and treatment of disease	(1) explore advanced technologies for the diagnosis of disease		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(6) The student examines a variety of human diseases. The student is expected to:	(B) explore advanced technologies for the diagnosis and treatment of disease	(2) explore advanced technologies for the treatment of disease		
(6) The student examines a variety of human diseases. The student is expected to:	(C) examine reemergence of diseases such as malaria, tuberculosis, and polio	(1) examine reemergence of diseases		
(6) The student examines a variety of human diseases. The student is expected to:	(D) describe drug-resistant diseases			
(6) The student examines a variety of human diseases. The student is expected to:	(E) differentiate between congenital disorders and childhood diseases			
(6) The student examines a variety of human diseases. The student is expected to:	(F) investigate ways diseases affect multiple body systems			
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(A) evaluate public health issues related to asepsis, isolation, immunization, and quarantine	(1) evaluate public health issues related to asepsis		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(A) evaluate public health issues related to asepsis, isolation, immunization, and quarantine	(2) evaluate public health issues related to isolation		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(A) evaluate public health issues related to asepsis, isolation, immunization, and quarantine	(3) evaluate public health issues related to immunization		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(A) evaluate public health issues related to asepsis, isolation, immunization, and quarantine	(4) evaluate public health issues related to quarantine		

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TEKS (Knowledge and Skills)	Student Expectation	Breakout	Element	Subelement
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(B) analyze the effects of stress and aging on the body	(1) analyze the effects of stress on the body		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(B) analyze the effects of stress and aging on the body	(2) analyze the effects of aging on the body		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(C) evaluate treatment options for diseases			
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(D) investigate diseases that threaten world health and propose intervention strategies	(1) investigate diseases that threaten world health		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(D) investigate diseases that threaten world health and propose intervention strategies	(2) propose intervention strategies [for diseases]		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(E) develop a plan for personal health and wellness	(1) develop a plan for personal health		
(7) The student integrates the effects of disease prevention and control. The student is expected to:	(E) develop a plan for personal health and wellness	(2) develop a plan for personal wellness		