# Scope & Sequence

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| Course Name: Oil and Gas Production II **TSDS PEIMS Code:** 13001260 | | | **Course Credit:** 1.0  **Course Requirements:** Recommended for Grades 10-12.  **Prerequisites:** Oil and Gas Production I. |
| **Course Description:** In Oil and Gas Production II, students will gain knowledge of the specific requirements for entry into post-secondary education and employment in the petroleum industry; research and discuss petroleum economics; research and discuss the modes of transportation in the petroleum industry; research and discuss environmental, health, and safety concerns; research and discuss different energy sources; and prepare for industry certification. | | | |
| **NOTE:** This is a suggested scope and sequence for the course content. This content will work with any textbook or instructional materials. If locally adapted, make sure all TEKS are covered. | | | |
| **Total Number of Periods**  **Total Number of Minutes**  **Total Number of Hours** | 175 Periods  7,875 Minutes  131.5 Hours\* | \*Schedule calculations based on 175/180 calendar days. For 0.5 credit courses, schedule is calculated out of 88/90 days. Scope and sequence allows additional time for guest speakers, student presentations, field trips, remediation, extended learning activities, etc. | |
| **Unit Number, Title, and Brief Description** | **# of Class Periods\***  (assumes 45-minute periods)  Total minutes per unit | **TEKS Covered**  **130.14. (c) Knowledge and skills** | |
| **Unit 1: Professional Standards/Employability Skills**  Students will discuss the professional standards and employability skills, including identifying career development and entrepreneurship opportunities in the field of agriculture, food, and natural resources, identifying careers in agriculture, food, and natural resources with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies, applying technology skills to create an electronic portfolio of skills and abilities, applying competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation. Students will further develop and demonstrate these skills and attributes throughout the course. In small groups and/or in other classroom activities, students will demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace, identify appropriate work habits, ethical conduct and legal responsibilities, and characteristics of good citizenship skills. | 25 periods  1,125 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:  (A) identify career development, education, and entrepreneurship opportunities in the field of agriculture, food, and natural resources;  (B) identify careers in agriculture, food, and natural resources with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;  (C) apply technology skills to create an electronic portfolio of skills and abilities;  (D) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in agriculture, food, and natural resources;  (E) demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and  (F) analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills. | |
| **Unit 2: Modes of Transportation and Environmental, Health, and Safety**  Students will research and discuss the modes of transportation and environmental, health, and safety concerns. In small groups and/or in other classroom activities, students will describe evolution of transportation in the petroleum industry, research and access the various ground methods of transportation, survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry, research and discuss petroleum economics, compare and contrast marketing, sales, and distribution of petroleum products, identify supply chain businesses that create new supplies of oil and gas, identify supply creation companies and how they operate, discuss the factors in investment decision-making, and calculate rates of return to evaluate prospects. As a culminating activity for this unit, students will prepare a report that represents an overall understanding of the modes of transportation and environmental, health, and safety concerns as they have learned throughout this unit. | 50 periods  2,250 minutes | (3) The student researches and discusses the modes of transportation and environmental, health, and safety concerns. The student is expected to:  (A) describe evolution of transportation in the petroleum industry;  (B) research and access the various ground methods of transportation;  (C) survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry;  (D) research and discuss petroleum economics;  (E) compare and contrast marketing, sales, and distribution of petroleum products;  (F) identify supply chain businesses that create new supplies of oil and gas;  (G) identify supply creation companies and how they operate;  (H) discuss the factors in investment decision-making; and  (I) calculate rates of return to evaluate prospects. | |
| **Unit 3: Disposing of Oil and Gas and Cleanup**  Students will research the different methods of disposing of oil and gas waste and methods of cleanup. In small groups and/or in other classroom activities, students will discuss the disposal methods of exploration and production wastes, identify cleanup methods or blowouts and spills, and identify refining processes that minimize environmental impact. | 30 periods  1,350 minutes | (4) The student researches the different methods of disposing of oil and gas waste and methods of cleanup. The student is expected to:  (A) discuss the disposal methods of exploration and production wastes;  (B) identify cleanup methods for blowouts and spills; and  (C) identify refining processes that minimize environmental impact. | |
| **Unit 4: Energy Sources and Priorities**  Students will research and identify the different energy sources and priorities for the oil and gas industry. In small groups and/or in other classroom activities, research the petroleum industry to identify renewable energy sources, present the challenges and priorities of the petroleum industry, research the critical technologies needed in the future, and research the nontechnical solutions to energy needs. As a culminating activity for this unit, students will prepare a report that represents an overall understanding of the different energy sources and priorities for the oil and gas industry. | 35 periods  1,575 minutes | (5) The student researches and identifies the different energy sources and priorities for the oil and gas industry. The student is expected to:  (A) research the petroleum industry to identify renewable energy sources;  (B) present the challenges and priorities of the petroleum industry;  (C) research the critical technologies needed in the future; and  (D) research the nontechnical solutions to energy needs. | |
| **Unit 5: Supervised Agriculture Experience Program**  Students will discuss and develop all components of a supervised agriculture experience. Through a variety of classroom activities, students will utilize appropriate technology to plan, propose, conduct, document and evaluate their supervised agriculture experience program, apply appropriate record-keeping skills, and participate in leadership opportunities. As a culminating unit activity, students will produce and participate in a local program of activities using a strategic planning process. | 35 periods  1,575 minutes | (2) The student develops a supervised agriculture experience program. The student is expected to:  (A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;  (B) apply proper record-keeping skills as they relate to the supervised agriculture experience;  (C) participate in youth leadership opportunities to create a well-rounded experience program; and  (D) produce and participate in a local program of activities using a strategic planning process. | |