

This document provides guidance to Oklahoma educators regarding course codes for science in light of the changes to the graduation requirements for science¹ and the removal of a number of course codes that were deemed to be unnecessary.

Table 1 showcases the high school science course codes and how those course codes correspond to the three domains of science discussed in the revised College Preparatory/Work Ready curriculum requirements².

Table 2 provides information about a few changes to the Oklahoma State Department of Education course codes for science that will go into effect for the 2017-2018 school year.

Table 1: Physical Science, Life Science, and Earth/Space Science

Of the three units or sets of competencies of laboratory science required for the College Preparatory/Work Ready curriculum, **ONE must be a life science meeting the standards for Biology 1, ONE must be a physical science meeting the standards for Physical Science, Chemistry or Physics, and ONE must be from the domains of physical science, life science, or earth and space science** with content and rigor above Biology 1 or Physical Science. The following list provides a categorization for all existing high school science course codes.

PHYSICAL SCIENCE	LIFE SCIENCE	EARTH & SPACE SCIENCE
5010 Aeronautics	5021 Biology 1 A (1/2 Unit Credit)*	5020 Astronomy
5051 Chemistry 1*	5022 Biology 1 B (1/2 Unit Credit)*	5061 Earth Science *
5052 Chemistry 2	5031 Biology 1*	5140 Geology
5055 AP Chemistry	5032 Biology 2	5335 Meteorology
5160 Physical Science*	5035 AP Biology	
5211 Physics 1*	5038 Biotechnology	
5212 Physics 2	5040 Botany	
5213 AP Physics 1 - Algebra Based	5115 Life Science	
5214 AP Physics 2 - Algebra Based	5120 Environmental Science*	
5215 AP Physics B	5121 AP Environmental Science	
5216 AP Physics C - Mechanics	5220 Physiology	
5217 AP Physics C - Elec. & Magnetism	5240 Zoology	
	5305 IB Science	
	5333 Anatomy	
	5334 Forensic Science	
	5336 Microbiology	
	5350 Ecology	

¹ Senate Bill 1380 (2015-2016) http://webserver1.lsb.state.ok.us/cf_pdf/2015-16%20ENR/SB/SB1380%20ENR.PDF

² College Preparatory/Work Ready curriculum checklists <http://sde.ok.gov/sde/achieving-classroom-excellence-resources>

Table 1: Physical Science, Life Science, and Earth/Space Science

NOTES

Alignment to Oklahoma Academic Standards: Those courses denoted with an asterisk (*) should align to the Oklahoma Academic Standards for Science provided for those courses.

Courses Without Standards: For courses where Oklahoma Academic Standards for Science do not exist, seek guidance from local universities about their course expectations and ensure the high school course sufficiently prepares students.

Laboratory Courses: All courses listed should be taught as laboratory courses integrating the eight Science and Engineering Practices and seven Crosscutting Concepts embedded in the Oklahoma Academic Standards for Science.

Career Technology Center Course: Once students have completed their physical science and life science credits, students can take a course listed under any of the three domains of physical science, life science or earth and space science. In addition, the third credit could also come from any of the Career Technology Courses listed for science credit (8706 PLTW Principles of Biomedical Science, 8707 PLTW Human Body Systems, 8708 PLTW Medical Interventions, 8714 PLTW Biotechnical Engineering, 8715 PLTW Aerospace Engineering).

Table 2: Course Codes Changes for Science

Subject codes are designed to serve two purposes for schools and the Oklahoma State Department of Education.

1. Subject codes identify the required **teacher certification** for the teacher of record; and
2. Subject codes provide schools **guidance on the related competencies** (or Oklahoma Academic Standards where applicable) that should be addressed within the course.

For the identified contextual and applied courses discussed below, the teacher certification requirements are the same as the standard versions of those courses. Further, the common practice for these courses regarding competencies has been to align to the Oklahoma Academic Standards for Mathematics or Science for the standard version of the course. This overlap in teacher certification requirements and alignment to academic standards, along with lingering confusion as to the purpose of these courses, prompted the subject code deletions identified here.

PHYSICAL SCIENCE DELETED COURSE CODES	PHYSICAL SCIENCE GUIDANCE
5321 Applied Chemistry 1	Now code as 5051 Chemistry 1
5322 Applied Chemistry 2	Now code as 5052 Chemistry 2

Table 2: Course Codes Changes for Science

5331 Applied Physics 1	Now code as 5211 Physics 1
5332 Applied Physics 2	Now code as 5212 Physics 2
LIFE SCIENCE DELETED COURSE CODES	LIFE SCIENCE GUIDANCE
5036 Contextual Biology 1	Now code as 5031 Biology 1
5310 Applied Biology	

NOTES

Applied and Contextual Science Conference Call: Further guidance was made available to all districts offering these deleted courses on April 10, 2017. Meeting notes and a recording of the conference call can be accessed at <http://bit.ly/courseguidance>.

Local Course Codes: The decision to remove the subject codes should not interfere with the ability of a school to develop and utilize local course codes.

- Just as schools have been able to offer courses such as Pre-AP or Honors Biology 1, while coding such a course as Biology 1 (5031), schools can still provide local courses such as Contextual Biology 1. In this case, the course should be coded as Biology 1 (5031), address the Oklahoma Academic Standards for Biology 1, and the teacher must be certified in Oklahoma in the appropriate area.

Serving Students with Special Needs: The decision to remove the subject codes **should not interfere with the ability of a school to provide individualized instruction based on a student’s needs.**

- If it is determined that a student would benefit from a precursor or companion course to a science credit-bearing course, students can still be enrolled in:
 - Pre-Biology (5023), Science Remediation (5037) or General Science (5133) for elective credit.
- If it is determined that a student would benefit from alternative forms of instruction to meet their learning needs, students should be enrolled in the *standard* version of the science credit-bearing course and be supported with differentiated instruction methods (co-teaching, direct instruction, accommodations, intensification models, additional tutoring, or other Tier 2 and Tier 3 remediation structures).